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Remarks on a Boodhist Coin or Medal, sent to the Society through Captain Macleod, Assistant Commissioner, Tenasserim, by H. H. the Prince of Mekkara. By Captain T. LATTER, 67th B. N. I. in a Letter from him to the Secretary to the Asiatic Society of Bengal.

My DEAR SIR,—I have the pleasure of returning you the coin with which you intrusted me, together with the following remarks:—

The coin is Boodhist, and purely symbolical, having no legend, or characters whatever. I am also of opinion that it does not present any peculiarly interesting feature; is of a modern date; and at a time when carelessness existed in reference to the symbols of the Boodhist faith.

The first peculiarity that I will notice is the design in the centre, ("a" fig. 1,) which is a Boodhist emblem, representing a "tsédyä," or small Pagoda, in which are deposited reliques of Boodh, volumes of the "Tăra," or sacred Law; it is almost universally found depicted on Boodhist coins. But there is a peculiarity about this one which I am not aware has hitherto been met with, and that is, that instead of this "tsédyä," being represented as usual by a cumulus of hemispheres, either three (v. fig. 3,) or six (v. fig. 4,) in number; in the first instance always arranged two for the base, and one for the apex;

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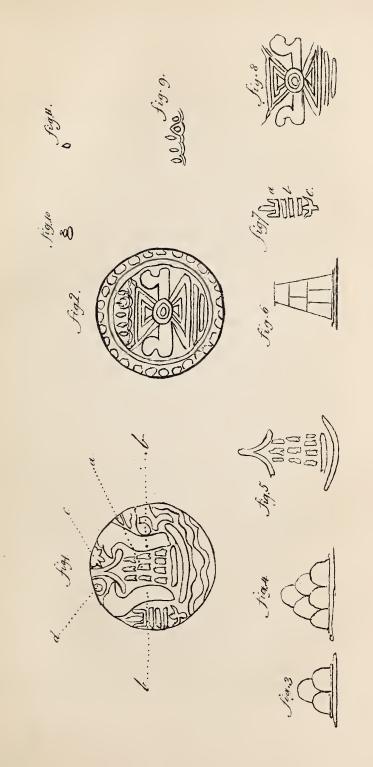
in the other, three for the base, two for the next layer, and one for the top; this triple combination is essentially requisite for the truthfulness of such Boodhist symbols. It will be first remarked that the "tsédyă," in the instance before us, is not represented by a pyramid of hemispheres, but by one of upright glyphs, surmounted with a sort of parasol roof. It has been a common remark, that the different representations of the sacred structures of the early nations of the world shewed a remarkable similarity, in fact seemed to be copies of their own domiciles. Now the best division, as far as domiciles are concerned, of these early races, may be said to be two, viz. the Troglodyte and the Scenite; the dweller in caves, and the dweller in tents; and in proportion as the cave is a ruder and more uncouth dwelling than the tent, so does it argue an earlier period. But there was a Boodhism that was Troglodyte and a Boodhism that was Scenite, a Boodhism of the cave, and a Boodhism of the tent, but Boodhism was not introduced among the tent-dwelling race till at a comparatively speaking very recent æra. Now the "tsédyă" emblems, (fig. No. 3 and 4) are representations of the hemispherical convavity of a cave, and appertain therefore to the Boodhism of the cave, and are therefore of a more ancient type than the one under consideration, (fig. 5,) which is a scenite " tsédyă," or representation of a tent, having a tent-like roof, &c. In the appendix on Boodhist emblems to his "Notes on the state of ancient India," Col. Sykes says, "It is to be remarked however, that when the Chaitya, or temple of relics is sculptured out of the rocks, it is represented not by the triple hemispheres, but by a very short truncated cylinder surmounted by a hemisphere, and crowned with a parasol, or an umbrella." Here we find described a mixed or transition tsédyă having the hemispherical top of a cave, and the parasol roof of a tent. It is to be borne in mind, that though the race who first inhabited the cave and consecrated it as a place of worship, were comparatively low in the scale of civilisation ; the decorations of them fell to their posterity when well advanced in civilisation and art, as is shewn by the magnificent nature of the ornaments; to them they were haunts consecrated by the reminiscences of an ancient faith; and it is not at all unlikely that they (sufficiently advanced in civilisation to have possessed themselves of tents and roofed buildings) should have added the roofed, or scenite " tsédyă," to the list of decorations. 1844.]

I look therefore upon those Deghopes as more modern then the hemispherical "tsédya". The form however of the "tsédya" before us, which I may call a scenite "tsédyă," is not, to the best of my knowledge, found on coins, although, according to Col. Sykes, a complicated one exists sculptured on the rocks of the cave temples; there is however, an approach to one figured the last in the row of "tsédyăs" given by Col. Sykes, in the plate accompanying the notes above referred to; it is represented (fig. 6) in our plate, but this is a true and correct "tsédya;" for the individual objects of which it is composed are trine in their combination. It is to be remarked, that 3 is a most sacred number in the mind of a Boodhist, endeared to him as symbolic of the most sacred tenets of his faith; not only typifying the holy Triad, "God, the Law, and the Congregation," but also calling to his recollection the three ways by which he progresses to Nieban, "the not to be;" the three grades of initiation before he can attain the crowning point of his craft. If we count then the number of hemispheres in the base and each side of the "tsédyă" (fig. 4,) or the number of quadrangular figures in the "tsédyă," (fig. 6,) we shall find there are three in each face; making by counting in that way 9 in the three faces, forming a trebly expressive symbol of the expressive three; for this reason, nine was ever held as a mystical and holy number among Boodhists, hence its Burman name $K\bar{o}$, "to worship, reverence," hence likewise its Pali representation by the nănă rădăna, or nine jewels;" Burmanised into nănă ra, "the essence of the nine," these jewels were worn, set in a ring, as a charm against every evil. In our "tsédyă" however (fig. 6,) we have 10 upright glyphs, thus vitiating the whole. The scenic "tsédya" is the prototype of the modern " Pyaththad."

The next mark to which I wish to call your attention, are the two similar upright figures on the right and left of the " $ts\acute{e}dy\check{a}$," (b. b. fig. l.) These are representations of the head of the Cobra Capella, (Coluber Naga.) This is an interpolation of the Semitic myth of the Dragon, &c. into Boodhist story, and which does not properly belong to it; the account in elucidation of this will be found in the accompanying note,* and will at once point out its Brahminical origin.

* Gaudama remained with his family till he was 29 years of age, he had married and had had one son; he then left his family and kindred and wandered in the The two emblems over the roof of the "tsédyă," are doubtful, that to the right (c. fig. 1,) may be intended for a representation of the Boodhist praying wheel; or may be for the sun, and that to the left

jungles and woods for six years; at the end of that time he met a Brahmin of the name of Thoteya, who was cutting grass. This Brahmin gave him seven hundles of grass, with these he continued his wanderings till he arrived at a peepul tree in Booddha Gaya. He then felt a secret influence come over him, that the time of his hecoming a Boodh was at hand; he accordingly spread out the seven hundles of grass and said, "Let a sign appear." Immediately there arose from the earth a throne of diamonds, upon which he sat himself down, and then the mysterious influence came over him that rendered him a Boodh. He remained seven days on this throne, heing impregnated with this Booddhic spell; this spot was called Raja Paleng, or "the Royal seat." The ruins of a tsédya, built over it by after kings is still shewn. From thence he arose and removed a short distance to the eastward, and sat down contemplating the throne with a fascinated love ; he remained in this state without moving, or even winking his eyes for seven days; this spot was thence call anie meethaka, from anie, "without," and meethaka, "to wink;" here also, as in all the other spots, the ruins of a tsédya are shewn. Hence he removed to a spot a little farther to the eastward, and kept walking hackwards and forwards in contemplation during the space of another seven days, this spot was styled Radana Chundkomar, "or the jewelled walk," a huilding, the length of the walk, was huilt over it hy after kings, the ruins of which are yet shewn. From thence he moved a short distance to the west; and there the Déwatas huilt him an habitation of resplendent gems, in which he remained for seven days, and concocted the Abiedhurma, or "excellent Justice," the mode hy which mankind may attain the Nieban, this spot was called Radana Ghur, or the " house of jewels." Thence he removed a short distance to a peepul tree where the shepherds came for shade, and remained there seven days absorbed in meditation, this spot was called "Ajie pala Nigroda, or the shepherds' peepul tree." Thence he removed to a place called Mooja Linda, and there remained seven days, during which a fearful storm arose, such as was never witnessed before, and the rain descended in torrents ; it was then that the Naga king, who was in a lake close by, bethought himself to shelter Gaudama ; he first intended to have raised for him hy magic a shed of jewels, that should excel in splendor the house made by the Déwatas, but then he thought himself of a method by which he might shew his devotion in a still more enthusiastic way ; so he distended himself enormously, and turned himself seven times "fold upon fold" round Gaudama, so as to form a hollow cavity ; his head also he distended, and with that he shielded the head of the God. In the midst also he formed a seat resplendent with gems, on which he placed Gaudama; but the latter was so absorbed in meditation, that all this passing scene around him was unheeded. From thence Gaudama rose and removed to a place, where he remained in meditation another seven days. During these 49 days, Gaudama was undergoing that impregnation that rendered him a finished Boodh. He neither ate, nor drank, nor washed his mouth. He then arose, took refreshment, and commenced his ministry. The above account is taken from a Pali work, styled Oossathako Lankara, or "the ornament of the Devout." All the above-mentioned places are in the environs of Boodha Gaya.





Remarks on a Boodhist Coin.

(d. fig. 1,) for the moon; in the latter case it is another evidence of the spurious nature of the symbol of this coin, as these two luminaries have nothing particular to do in Boodhist writ.

The symbols on the left hand of the coin, figured by themselves, (fig. 7,) are very common Boodhist ones. The lower one (c. fig. 7,) is most probably a representation of the Swastika or cross, the distinguishing mark of a class of mystical Boodhists anterior to the time of Gaudama. The three parallel lines, or scores marked (b. fig. 7,) is a representation of the tri-glyph, the usual emblem of the Boodhist Triad, when they were wished to be expressed as three distinct things, viz. Bööddhä göön, "God or Boodha." Dhämmä göön, "the Law," and Sěnggha goon, "the Congregation." When these three were to be represented as one, in fact the Trinity (thărănă gŏŏn " the decisive attributes") then the tri-glyph was joined at the bottom like a trident.* (a. fig. 7.) As standards are very commonly found among Boodhist symbols, it is more than probable that the three glyphs were borne upon the banner; whilst the trident surmounted the staff. The tri-glyph seems to have been the cognisance of the town of Arracan, which was a famous seat of Boodhism according to tradition; and hence might have arose its name in Ptolemy of Tri-glyphon, which is the Greek translation he gives of the Hellenised term Tri-lingum, shewing that his information must have come from Brahmins, and that the latter had already began to appropriate to themselves the rights of an elder caste.

I have said that the three glyphs when joined at the bottom were symbolic of the Trinity, or Supreme Divinity; I believe it to be the prototype of the Coptic, \bowtie implying "potentiality"; the following are its types in the Hieratic Egyptian \amalg , in the Hieroglyphic \varliminf which last would be considered a very expressive Booddhic symbol.

It may not be here out of place to remark, that among many early nations three scores, or marks, were emblematic of the Supreme Divinity, either as among the ancient Hebrews by the three Yods $\gamma\gamma$; or by the high priest distending three fingers as he stretched out his hand over the assembled multitudes whilst bestowing his yearly benediction; many instances to this effect might be collected from

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^{*} To explain myself more clearly, if in the Doxology it were required to express by symbols, God the Father, God the Son, and God the Holy Ghost, then the tri-glyph would be used; if to express the Supreme and Triune God, then the trident.

various authors, but I will only mention a curious fact which has not hitherto been noticed, viz. that the \mathfrak{U} Allah of the Mussulman, is nothing, but three distinct upright marks. Sometimes these are found, I believe, united at the base.

, I have already had occasion to mention the reliance that is to be placed in numbers; by this means we may often determine the family to which a myth belongs. The number "Three," however, seems to have been common to all nations of the world as a sacred number; besides its arithmetical peculiarities, there are many phenomena in statics that must have been sufficiently known to all nations, to have accounted for its sacred character. The number "Seven" was held a perfect, or sacred number among the Semitic families of mankind, in allusion evidently to the seven epochs of creation mentioned by Moses; but in unmixed Boodhism it is not so held; whereas "Nine" is. Thus we see at once that the episode in Gaudama's life, mentioned in the note, is evidently a Semitic interpolation of Brahminism, from its allusions to the number Seven.

With reference to any other marks on this side of the coin, I am not aware that they have any particular interpretation, and are probably meant to fill up space.

On the obverse of the coin (fig. 2,) are various symbols, which I take to typify a Boodhist representation of this universe in particular, and former universes in general. Before I enter into an explanation, I must premise, that, according to the Boodhist, a *Măhagabba*, or great system, or creation of universes, is characterised by the presence of 28 Boodhs, a *Bŭddagabba*, or system such as the present mundane universe is characterised by a smaller number ; the present is characterised by 5 Boodhs, four of whom have already appeared, viz. *Kokŏŏthănda*, *Kōnagamă*, *Kathăbă*, and *Găŭdama*, the fifth *Arieyamată*, is still to appear. As he will be the 28th Boodh of this *Măhagabba*, he will close the number ; the universe will be utterly annihilated, and then perhaps

Novus ab integro sæclorum nascitur ordo.

It is difficult to determine what that curious emblem in the centre (a. fig. 2,) may represent Two triangles having two other triangles within them uniting their points in a circle having a dot in the centre. There seems to be that Masonic character about this symbol, that 1844.]

leads me to suspect that it may afford a corroborative argument to an opinion some time since formed by me, that Boodhism and Freemasonry originally came from the same source, existed together, as some of their symbols are identical, as also are their inculcations on the subject of Ethics. This however is a subject far too lengthy to discuss in this paper, and nothing but an ample discussion could do justice to the subject, and elicit the curious instances that might be adduced. Till however we can form a more decided opinion, we will call it what perhaps a Boodhist priest would do (who however would be no great authority), a representation of the Rajpăleng, or throne on which Gaudama underwent the Boodhic influence. Above this are five dropshaped figures representing the 5 Boodhs of the present Buddagabba, (fig. 9,) one of these has been nearly punched out by a hole made for a ribbon, as this coin seems to have been worn round the neck to avert the evil eye from a child. Figures of Boodh when small, are found sketched as in (fig. 10,) or should they be still smaller, the three are run into one (fig. 11.) I take then all that is included in the inner circle characterised by the 5 Boodhs, and the Rajpaleng of the present Boodh, to represent the present mundane universe. Beyond these are seen a number of circular figures, some of which have been forced into one another by pressure, however their number is distinctly 28, the number of Boodhs characteristic of that Mahagabba, or great period, of which this universal world is the last member.

In conclusion, I beg to remark that I have coined a word "Boodhic" to express a different idea from Boodhist, or Boodhistical. By Boodhist or Bhoodhistical, I mean of or belonging to him whom the present Boodhists style "Boodh" viz. Gaudama. By Boodhic I imply of or belonging to that Boodhism that existed long before the time of Guadama, which the latter improved upon and rendered more esoteric in its psychological system. Some symbols and ideas are Boodhic, such as the tri-glyph, the doctrine of the Metampsychosis, the sacredness of the yellow color, &c. &c. Others again, such as a representation of Gaudama's foot, his throne, &c. are Boodhist. Most of the Pra-bat, or impressions of Boodh's foot, are Boodhistical, but there is one Boodhic one, the only one I am aware of, close to the town of Akyab, at a place called Peer-Buddha, it is held in reverence by all natives of the east, whether Mussulman, Hindoo or Boodhist. It is very probable that Boodhic reliques and symbols would be found numerous in Abyssinia, some there undoubtedly are.

Dear Sir,

Yours truly,

T. LATTER.

P. S.—With reference to the obverse of the coin, (fig. 2,) any one in any way acquainted with the Boodhist religious Cosmology, will be almost sure to concur in the explanation I have given of it. With reference to that part of it, figured separately (fig. 8,) I have already declared that to the initiated it probably will call to mind some masonic emblem, its position on the coin in reference to the other symbols, would lead one to suppose that it was meant to symbolise the handiwork of the Great Architect and Geometrician of the Universe.

View of the principal Political Events that occurred in the Carnatic, from the dissolution of the Ancient Hindoo Government in 1564 till the Mogul Government was established in 1687, on the Conquest of the Capitals of Beejapoor and Golconda; compiled from various Authentic Memoirs and Original MSS., collected chiefly within the last ten years, and referred to in the Notes at the bottom of each page. By COLONEL MACKENZIE.

(Concluded from p. 421.)

IV.

Continuation of the State of the Carnatic Balla-Ghaut, carried down to the period of the death of Chick-Deo Vadyar, of Mysore, in 1704, with a Map, explanatory of the extent and situation of the Mysore Territories at that period.*

1. At the period of Chick Deo's death, the political state of the Car-

Final reduction and conquest of Beejapoor and Golconda, by Aurungzebe in 1687. natic began to assume a new aspect, that becomes now more interesting to an European reader, as an accurate knowledge of its situation at this time is essential for a clearer understanding of

these claims and pretensions, that not only then occupied the immediate parties, but ultimately engaged the European settlements in

* This part was hastily noted for the use of Colonel Wilks's designed work on the particular History of Mysore in 1808.

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their contests, with consequences that have agitated these countries down to a very late period, and it is also imagined, that a more perfect knowledge of the changes since introduced into the internal policy and management of the country, may be assisted by a distinct view of its state at that time, and of the successive administrations and rulers that rapidly followed each other within this period in the government of the Carnatic. It is proposed here to sketch out the situation and extent of the several powers that were in existence at this epoch, and in connection with the new formed state of Mysore; this may be also an useful preliminary to some account of the various modifications arising from the circumstances of the times, and the sudden appearance of a new power on the theatre of action.

2. At the very moment that the recent Mogul conquest of Beeja-

Progress of the further conquests in the Deckan, on the fall of Beejapoor and Golconda. poor and Golconda seemed to have swallowed up even the name with resources of these states, and threatened to reduce the whole of the Peninsula to the Mahomedan yoke, the Marhatta nation which

had been suddenly risen, and under a form hitherto unknown in politics, comprehending a system neither completely dependent on the will of one person, nor yet regulated by any mode hitherto observed of consulting the interests of a nation in the voice of their most distinguished

Retarded by the sudden growth of the Marhatta power. counsellors, wresting a share of the spoils from the conqueror, opposed an unexpected barrier to the Hindoos of the South; but as the effects of their

depredations on the provinces of the Carnatic, by repeated invasions that they carried to the utmost extent about this time, had not yet been made the pretence of invasion under the memorable claim of *choute*, they are here barely introduced so far, to illustrate the policy of Chick Deo and his successors, and the place which that new state now began to assume in the general scale of Balla-Ghaut, which soon after this time fell, to be considered as a dependent province of the government of the Deccan.

3. One of the first steps of Aurungzebe, after the fall of Beejapoor,

A. D. 1689. First Mogul army sent into the Carnatic with CossimCawna's fouzdar of Carnatic Beejapoor. was to detach Cassim Cawn with an army to reduce the upper Carnatic. He was attended by several subordinate officers, civil and military, among whom Ali Merdan is mentioned as fouzdar of Canchee. He seems to have met little opposition. He soon succeeded in establishing the first Mogul system of government in the country, and is considered as the first Mogul Fouzdar of Beejapoor Carnatic. He was surprized by the Marhattas and the Chittledroog chief at Dodairee 11 years afterwards, where he died of a violent* death, whether by his own hands is doubtful. He yet appears in this interval to have effectually reduced the open country to the form of a province, dependent on the Soobedaree of Deckan, the general government of which was soon after conferred on the celebrated Zoolfacar Khan. After the reduction of Golconda, that officer appears to have been employed on an unceasing course of severe service for nearly 19 years till the death of that Emperor in 1707. Of the destructive warfare in which the whole country was for this time involved, some idea may be formed from its being especially stated, that in six months' time he fought 19 actions, and marched or countermarched 3000 coss.† To complete the measure of their wretchedness, the unfortunate inhabitants were at the same time afflicted by the accumulated misery of

yond the Coleroon laid under contribution.

The provinces be- severe famine, ‡ in addition to all the other horrors of war. In this time he made three different expeditions beyond the Cavery to Tanjore and Trichinopoly,

laying these countries under heavy contributions. He took Gingee and Wakenkaira, places memorable in the history of that time, more for the length of their sieges, than for the skill of the assailants, or the The former fortress had for sometime strength of these fortresses. been the refuge of Rama, the chief of the Marhattas; its capture had been a special object of the Emperor's vigilance and attention, and it was expected, that in its fall, the hopes of that aspiring nation would have been crushed, and the possession of the strongest fortress of the Carnatic Payen Ghaut have secured a seat of government, and a place

* See the Doodairee Memoir, confirmed by the Hakeekut Hindoosthan.

+ Scott, Vol. 11, p. - Some notices of Cossim Cawn and of the new Governors sent into the Carnatic occur in the Madras Records, (perused since the above was written,) in the end of the year 1687.

‡ This famine appears to have extended through the whole Peninsula. It is repeatedly mentioned in the Madras Records, with the precautions taken for the relief of the rising settlement. In the Memoir of Sree Permadoor, and in the Records or Annals of Condamir, the effects of the famine are detailed, and the extravagant prices to which grain of all kinds arose. The Cycle year Achaya is memorable as a period of aggravated distress from war, famine, and pestilence.

of arms. That siege being protracted for 10 years by treachery, by the cabals and intrigues of the nobles and even of the princes, at last fell in 1700;^{*} but in these views, the Moguls were disappointed. Rama escaped previous to the surrender, and the whole resources of the 96 Marhatta tribes were soon rallied around him, and Gingee was found to be so extremely unwholesome, that some years afterwards their armies cantoned on the plains of Arcot, which led to the establishment of that capital of the lower provinces in 1716.[†]

4. In consulting undubitable memoirs of these times, we are struck Deplorable state of the Deckan and Carnatic at this period. With surprise at the extraordinary number of horse kept up by the several powers, and are astonished at this day, how the country could support them. The Mahomedan writers complain, that this war was protracted, and the country ruined by the Imperialists not keeping up an adequateforce; and in proof of this, state, that at this long period of protracted warfare, "the Cavalry kept up by the Moguls amounted only to 34,000, while the late governments of Beejapoor and Golconda are stated to have constantly kept up the amazing number of 200,000 horse." This perhaps may be explained by recollecting, that the Marhattas had now not only got possession of a considerable part of the late territory and Ahmednuggur, and those tracts particularly of Baglana, &c. where horses are reared; but of the sea-ports of Dabool,

Overrun by the &c. as far South as Honore and Batcull, (and even Marhattas and Moguls. and Arabia; whence they were enabled to overrun the Carnatic with such vast swarms of marauding cavalry, that the writers of the time describe them as swarming like ants or locusts.§ "The establishment of a fleet by Seevajee, seems to have particularly pointed to this resource, and though it is not mentioned in any account of these times, it is not likely he would overlook the advantage of the trade already carried on by the Arabs in horses from time immemorial. From no

^{*} Madras Records.

⁺ The 96 Madras tribes are enumerated in the Marhatta Memoirs, Vol. I, p.-

[‡] For notice of the trade in horses from Arabia and Persia to India, see Cæsar Frederick's Account of Beejanagur and Batcull, Honore and Goa, in Churchill's Collections.

[§] See Scott, Vol. II, p. 107.

other quarter could they be provided, since the whole interior resources of Hindostan were in the hands of the Imperialists."*

5. The whole of the Mogul conquests in the South at first appear Mogul conquests in the Dekan formed early into one Soobah. Gradually extended with their conquests of the South. quests of the South. Berar ; but afterwards, as these by degrees fell, Beder and the rest of Berar were added, and the capital being removed from Burhanpoor to Aurungabad, they gradually extended their conquests further South, till under Aurungzebe and his deputies, the Soobadaree of Deckan, now at its greatest extent, was arranged into six Soobahs, viz:-

And finally com. 1. Candeish, capital Burhanpoor.

prehended within the conquered kingdoms, six Soobahs. Shahee dynasty.

3. Beder, ancient capital of the Bhaminee Sultans.

4. Berar, Elichpoor generally the capital.

5. Hydrabad, lately Golconda, capital of the Cootub-Shahee dynasty.

6. Bejapoor, capital of the Adil-Shahee dynasty.

The last (No. 5 and 6,) were formed from the late conquests; and the Carnatic and its dependencies were at this time formed into Circars, dependent upon either of them; being in fact those districts that had been reduced, or laid under contributions by the late governments of Beejapoor and Hydrabad, or Golconda; accordingly we find them enumerated under the distinctions of Hydrabad-Carnatic and Beejapoor-Carnatic, in the official registers of the government of Deckan.

7. These were further distinguished into Balla-Ghaut and Payen-Ghaut, according to their situation above or below the Ghauts.

8. The Carnatic-Hydrabad-Balla-Ghaut comprehend the pro-Comprehending sixty-six Mahals.
4 Gurramconda, and 5 Cummum, comprehending 66-purgunnahs, regularly assessed at a fixed revenue.

Four of these provinces afterwards formed the petty state of the

* See Seevajee's Memoir, where a detail of his resources, finances, forces and strongholds at the time of his death is given. His army or fleet is also mentioned. Patans of Kurpa,* who established themselves there about this period; and within a few years extended their possessions along the Eastern Ghauts to the Cavery, including Barramahl, most of which at this time belonged to Mysore. The part they afterwards acted in the transactions of these times will excuse this being noticed here, though at the period we are speaking of, they were not yet known as pretenders to power or consideration among the governments of the Peninsula.

9. The Carnatic-Hydrabad-Payen-Ghaut was divided into 14

Hydrabad-Carnatic-Payen-Ghaut afterwards the Province, Lieutenarcy or Nabobship of Arcot.

of Arcot.†

Gingee‡ was the first capital designed for this province by the Moguls, Arcot afterwards capital of the Soobah of the name. The European sea-ports and factories of *Pullicat, Madras, Sadras, Pondicherry, Tranquebar, Porto Novo* and *Negapatam* were in this division; where in the confusion of the times, we find the European agents alarmed and suffering from the predatory incursion of the Marhattas, Moguls, Patans, &c. to procure a precarious protection by frequent presents and bribes to the officers of all descriptions. Yet amidst these commotions, we find that the security derived to property, encouraged many of the natives to settle under their protection, and thus laid the foundation of the prosperity of these colonies that were at this time but weak and defenceless. Further details of this province, which was shortly to be the seat of events that ultimately led to a total change of government and power in the country, would be here out of place, than as they may be descriptive of the state of the country in general.

10. The Carnatic-Beejapoor appears to have been altogether considered as Balla-Ghaut, unless we except the dependencies south of the

* See Memoirs of the family of Kurpa, Canoul, &c.

† The principal Purgunnas or Mahals are enumerated in the Dufter. The tract lying South of the Palar, including Vellore, Gingee and Barramahl, are denominated Mooftesee, being lately conquered. The tract North of that, extending to Guntoor, including the present Jagheer, Nellore, Angole, &c. are all divided into Circars, see Dufter.

[‡] See Havart and Scott for the transactions at Gingee, and the Madras Records for the Embassy to Seevajee, under the year 1672.

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Coleroon, (rated as the Circars of Tanjore and Trichinopoly,) and Gingee* and its district, where it had extended its conquests below the Ghauts to the Eastern coast; its Western provinces are enumerated under their respective Circars. In forming this new province of Carnatic, it would appear that the arrangements of the preceding government of Beejapoor had been followed; and though Adone, and Ghazipoor or Nundial, lying South of the Toombuddra, from its natural situation, might be considered as properly belonging to the Carnatic, vet they are included[†] as distinct Circars (the 4th and 9th) of Soobah Beejapoor, either owing to their being earlier reduced previous to 1648, or to their being held at this time by some powerful families, t to whom they were still left as the price of abandoning the declining fortunes of the late dynasty. This eventually occasioned their separation from the rest, when the Balla-Ghaut-Carnatic, in the course of events, came under the domination of the possessor of the Mysore resources, 735 years afterwards; nor were they ever after connected under the same administration, until the cession by the Nizam in October 1800 to the East India Company, brought all the country lying South of the Toombuddra and Kistna once more under one government, an arrangement which undoubtedly promises more firmly to secure the tranquillity of the whole under one systematic rule, separated by these limits which nature prescribes as the best mark of division between distinct powers.

11. The important frontier province of Sanoor Bankapoor, also was not included in this arrangement, although it was part of the ancient Carnatic kingdom beyond the Toombuddra. It had been at an early period, on the fall of Ram-Raz, granted to one of the Patan chiefs of Beejapoor, who by cultivating the good graces, and embracing the party of the conqueror at an early period of this resolution, secured its possession in that family as a jagheer or military fief, dependent on the new Mogul conquests. In the Dufter it is entered as a Circar of Beejapoor, including 16 Mahals, and rated at a fixed revenue.

^{*} On Gingee as then reduced, depended the tract along the Coast from the Palar to the Coleroon, which Sevajee reduced in 1677, and was held for 10 years, till Beejapoor and Golconda fell, or rather until the capture of Gingee in 1700.

⁺ Adani Memoir.

[‡] Sanoor Memoir.

 $[\]S$ A. D. 1761, when Serah was ceded to Hyder by Basalut Jung, but Adoni was retained.

^{||} Sanoor subdivisions in the Dufter.

12. The important part that the three families* of Sanoor, Kurpa and Canoul, (who appear to have now rallied around them the remains of the first Affghan invaders,) took in the political transactions of the Carnatic, shortly after the death of Chick Deo Raja, had not yet commenced; and the origin of their power was yet in embryo; but was shortly to make a considerable figure in events connected with Mysore, and the rest of the country.

13. It is proper to advert to this political organization of the country under these divisions of Beejapoor and Hydrabad Carnatic-Balla-Ghaut, as they are necessary for understanding the discussions that have since repeatedly followed this distribution on the official and revenue records of the Government; and the frequent claims and pretensions on different chiefs or zemindaries as dependents on one or other claims, which have been even referred to in the political negotiations[†] of later years, under circumstances that tended to embarrass and distract; and might have eventually been followed by more important consequences.

14. In the wars and negotiations that ensued for 110 years in the Carnatic, before the basis of one regular system of Civil government was established in 1800, the extent, situation and relative connection of the several subjects of contention can scarcely be understood without recollecting the origin of these two great divisions or governments, which though sometimes united at first in one person, were afterwards separated, and under the title of the Nabobs of Serah[‡] and of Arcot. The officers holding them came by degrees to assume a political character, and degree of power that enabled them to establish their families in the hereditary government of these provinces in a state little short of independence.

15. Indeed, their origin was so far lost sight of, that the legitimate rights of the native provinces and population were entirely absorbed in the mutual pretensions of the families of Hyder Alli and of Maho-

^{*} Memoir of the Patan families of Sanoor, Canoul and Kurpa. The Kurpa-cur obtained possession at one time of nearly the whole country extending along the Eastern Ghauts, from the Kistna to the Cavery, including Cummum, Kurpa, Gurramconda, Baramahl, Colar, &c.

⁺ See the treaty of Seringapatam in 1792.

[‡] Hyder's first appearance as General of Mysore, was followed by the pretensions to the Nabobship of Serah, after the cession of Serah and Ooscotta, from Basalut Jung, in A. D. 1761.

med Alli; pretensions that originated in the respective range of the military command of two deputies of the Mogul viceroy of Deckan, or rather (as in the case of Hyder particularly,) of persons who had in the disturbed state of the times, possessed themselves of their title and authority. Even the Carnatic itself in this short space lost its name, when by an unaccountable misnomer, that name which originally belonged to a central province of the upper country, and afterwards to the empire founded upon it, was in European instruments of the highest political import, exclusively applied to that tract of the lower country, which stretches along the coast from the Gondegama to the Coleroon, and which though formerly governed as a dependency of the Carnatic, has always among the natives been known by the name of Tonda-Mundalum, or Nara-Mundalum.*

16. To return from what may scarcely be deemed a digression from the state of the country on Chick Deo's demise, (since it relates so intimately to the future destination of his acquired territory,) it is proper here to notice the distribution that took place of the Southern provinces under the Mogul arrangement. In this distracted state of things, when the new form was introduced about 1687, 16 years previous to the date we are treating of, it would appear that the Mogul chiefs were guided in some degree by the forms they found already established under Beejapoor and Golconda, which do not appear materially to have differed in principle† from their own, if we compare them with the system of Akbar, (or rather that of his Hindoo financial minister Toder Mull.)

Rana-doolah, (or as is said Shahjee,) had originally organized the conquered country south of Cavery into 7 purgunnahs or mahals, including the capital.

1. Serah, 3. Bookapatam, 5. Colar and 6. Hoscotta,

2. Boodiall, 4. Pennaconda, Bangalore, 7. Pedda Ballapoor. But Bangalore with its district, (as has been already mentioned,) was transferred by treaty to Chick-Deo, in the year 1687, within three days of his getting possession.

* Nara Mundalum, *i. e.* the lower region, a name which with further illustration of the Ancient History of this country, has but very recently come to our knowledge, (February 19, 1810,) and furnishes a key to the real translation of the classical nomenclature of the Alexandrian geographers, Paralia, Soretanum, &c.

+ See Memoir of Serah.

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17. These districts were subdivided, or rather the former arrangement was preserved of samoots, or mahals; mouza, or established villages; and majara, hamlets or dependencies, under a system organized and managed by a new class or colony of Marhatta Bramins, who attended the Mogul chiefs, and whose descendants still officiate in the financial departments throughout the Carnatic. From a descendant of one of their chiefs, several notices of this system were obtained at Serah in 1801.

18. The above 7 purgunnahs appear under the latter arrangement of Asoph Jah, to be then subdivided in 55^* mahals, assessed at a stipulated revenue or *cudanee*, collected under the immediate management of the imperial officers; but it is probable, that this subdivision existed also at this time (1704,) and on examination of the names registered in the general Dufter of Deckan, there is reason to suppose, that both the Patan and Mogul arrangements were generally regulated by the ancient subdivisions of the country, as far as was consistent with their general plan of reducing the conquered states to the form of provinces, subdivided into lesser, convenient portions named circars, taroofs, samools, mahals, mouzas, &c., and probably founded on the arrangements of *dasums*, samas, naads, purgunnahs, habilies, grams, &c. &c. that prevailed among the Hindoos from early times.†

19. The revenue of these organized provinces was realized by officers specially appointed for that purpose in the department of the exchequer, (deewannee khalsa,) but the Moguls appear very early to have introduced the practice of ceding considerable tracts of the best lands to the munsubdars, to support certain bodies of forces maintained agreeable to their respective ranks and titles; which were originally conferred according to the strength of their quotas though at the time we are speaking of, strict musters were permitted to be dispensed with. The circumstances of the times, when the conquest was effected by armies composed in a great measure of a militia thus maintained, and perhaps allowed to increase beyond the just proportion of

^{*} See Appendix No. 6, containing the list of the mahals, extracted from the Dufter, and collated with that of the Hakeekut, &c.

[†] These divisions and provincial arrangements are particularly detailed in the manner illustrative of the History of the Carnatic under the Balal dynasty; in the Ram Raja Cheritra; in the Bangalore Memoir, &c. &c.; and the complete lists of the 56 dasums are obtained from all quarters of the Peninsula in different languages.

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their grants, (for we find that inconveniences were very soon felt and complained of,) and the necessity of conciliating the Deckan chiefs, many of whom maintained high pretensions, also increased the evil in the Beejapoor government. Indeed it had previously proceeded to an extent that was supposed, from the overgrown power vested in the great landholders,* to have accelerated the fall of that government; since latterly the Sovereign could be only considered as the head of an arrogant aristocracy, who were more disposed to dictate than to obey. In Golconda, their power was controlled by the influence of the Bramin ministers, who yet committed a fault the reverse, by attempting to manage by corruption and the influence of wealth, which in time of great national distress, is never found to improve public virtue. The great influence conceded to the Mahomedan munsubdars in the Mogul system, perhaps contributed to much of the disorders that soon after ensued in the Carnatic, which was further increased by the number of Hindoo chieftains (self-erected,) zemindars or polligars, that were dependent on the province, and attached themselves to one or other of the several parties that soon after arose on the death of Aurungzebe.

20. Upwards of thirty polligars[†] are enumerated, who were dependent on the Southern parts of the Carnatic some little time previous to the Mahomedan invasion, but they were probably still more numerous, unless that title be restricted to a certain description of Hindoo petty chiefs and polligars, who were still permitted from various motives to hold their more remote, or less productive districts, on paying a fixed tribute or condanee under a constrained allegiance, and were classed as zemindars dependent upon the province of Carnatic. This tribute was always collected with difficulty, and frequently by force of arms; but exclusive of these zemindars, whose weakness kept them in a state of undoubted dependence, there are others enumerated in the list of 27 Hindoo[‡] chiefs dependent on the Carnatic Beejapoor, (in the Duf-

* See Universal History, Vol. 6, p. ---

† See Bagalore Memoir for these poligars enumerated, also the Memoirs of Serah, Bednore, &c. The famous Sevajee's new-formed fleet extended their ravages to the coast of Canara at this time, and he himself in person commanded it, when Baruloo was plundered of a very considerable booty. See Marhatta Memoir of Sevajee.

[‡] See list of zemindars of Sera in the Appendix No. 7, but these are only the zemindars registered in 1742. ter or Register, and which are presumed to have been continued from the Beejapoor government,) whose pretensions to be included in this list are more equivocal, and were undoubtedly not always acknowledged even at the forming of that record. Though Cassim Cawn subjugated the open country, neither he nor his successors could reduce the rajahs of Seringapatam, Chitteldroog, Ickery or Bednore and others, who maintained their independence, until Saadut-Olla Khan, (who Bahadoor Shah appointed Soobah of the two Carnatics in 1710,) by collecting all his force from Payen-Ghaut, Cuddapa and Serah, obliged them to pay tribute in that year. Of these, at the period we speak of (1704), Mysore or Seringapatam we see was nearly independent, Bednore and Soonda were equally so, and were too near the Marhattas to be reduced to a regular tribute, and we find they resisted both, generally with success. Chitteldroog at times paid reluctant contributions to one or other; and the chiefs of Mallialum and Travancore are not even enumerated in the Dufter of the Deckan. Their claims on the former under the word Calicut, are indeed some years afterwards mentioned as a matter of doubtful acquisition; and the claims on Travancore could only arise from the paramount pretensions of Madura, which under the head of Trichinopoly, together with Tanjore, form two Circars in that record.

21. It has been already observed, that Tanjore and Trichinopoly were not included in the province of Beejapore in the register; though it is highly probable, that on the first expedition of Zoolfucar Khan, they might have been considered as such, since Eckojee's possession of the former was effected under the authority from Beejapoor only [a few] years before; but it is not known that any tribute was exacted from them previous to that invasion. Zoolfucar, however, undoubtedly laid under heavy contributions both countries, and though the Marhattas of Tanjore are accused of keeping aloof during the siege of Gingee, yet it is highly probable, (what is indeed alleged,) that influenced by ties of consanguinity, some degree of assistance clandestinely furnished to their countrymen at Gingee, had drawn the vengeance of the conquerors on them; and in the contentions about Tanjore of late years, we find a perwanna* of Zoolfucar Khan quoted as authority for the

* History of the Management of the East India Company quoted from memory, but the work cannot be referred to here.

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paramount claim of the Nabob of the Carnatic on that country; yet these expeditions appear to have been rather desultory, and intended to raise supplies, than to make a *settlement of tribute*, which we find a few years afterwards exacted under a more systematic rule.

22. Trichinopoly at this time was under a weak regency, managed by a woman, and from the large sums rated in the register, we may presume the tribute actually levied was very heavy. As from about this period we hear no longer of the wars and depredations of the Madurans and Mysoreans, we may suppose that they were considered under the protection of the Moguls. Mysore had got possession indeed of Salem, Parmutty, Namcul and Darampoory,* but it is only in the next reign we find Dodda-Daba Raja seizing on Coimbatoor. Shortly after the Dewan-Fouzdar, (for he united both offices in his own person,) Saadut-Oolla, had enforced, it is said, a tribute from Mysore. In the civil contentions that agitated the empire at this time, it is difficult to procure further documents to explain these transactions.

23. The sudden incursions of the Gatka Marhatta[†] chiefs had at one time alarmed Mysore, and put Seringapatam in danger. It is probable these lawless freebooters (for such they are by all parties described to be) had made this expedition from Gingee, and is the same mentioned in the Madras Records; but after the capture of that place, and during the incessant predatory war that was carried on through the Carnatic by the Marhattas, denominated in the story of the times "the wars of Santa and Dana," there is room to think, that the proper country of Mysore enjoyed a degree of tranquillity and security little known at this time by the other provinces.

24. It was in this interval then that we may imagine Chick-Deo applied himself to settle his country, to consolidate its resources, and to establish those improvements and regulations which still distinguish his name among the ablest and most beneficent princes of these coun-

† See Memoir of the Mysore family, and of the Calala family.

^{*} Sattimunglum and its district is doubtful; we may therefore infer that the Mysore territory at this period extended no further to the South than to the present limits of the Passes of Guzzelhutty, Caveripoorum, &c. The more Northern parts of Barramahl are supposed to have been dependent on Colar, as Amboor, &c. A complete translation of the Madura Memoir will throw further light on this part.

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tries. Even the Emperor appears to have courted his neutrality at A. D. 1700. *Deo-Rayel*, and a royal signet being conferred on him. The Naik of Maissur* for the first time assumed the honors of royalty by ascending a throne; a measure which so wily a politician would scarcely have ventured on without the assurance of the Emperor's concurrence; or at least, that it would not be followed by the vengeance exercised towards his brother of Bednore some years before, for an illtimed assumption of the same distinctions.[†]

25. We may then consider the territory, the title, and the resources of Mysore fully established at the demise of this prince; its extent being 28,416 square miles and 101 districts of a revenue[‡] of _______ under an economy still more productive than that of the present day, if allowance be made for ruined villages and the decrease of the value of money since. This in the midst of a fierce and bloody war, which after ravaging the whole Deckan for 10 years, and at this moment promising no termination, with the new Mogul government (still contending for the paramount authority it had scarcely established) on the

Limits of the Mysore dominions in 1704, see Map No. 2. North and East, the Bednore, Chittledroog and Malabar chiefs, and the weak state of Trichinopoly covering it from the West to the South, entirely in-

sulated by itself on the height of the Ghauts, at the death of Chick Deo, Mysore commanded a respect which was felt by the most powerful, and kept its rivals among the native chiefs of the Carnatic in awe.

APPENDIX No. 1.

Historical Account of the establishment of the Europeans at Madras or Chinnapatam, from a Marhatta Manuscript, communicated by one of the ancient Provincial Officers in April 1802. Translated by CAVELLY VENKATA BORIA, Bramin.

The Raja Streeranga Rayel reigned for the space of six years and two A. D. 1639. months, from the Fusly 1049 up to the month of Avanee A. S. 1562. of 1056. In this year Poonamelle was under the

* Also the Madras Records, A. D. —— where he is denominated the Naik of Maissur.

+ Bednore Memoir.

‡ See list of the Mysore districts at this period, Appendix No. 6.

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management and in the possession of the poligar of the Damarla* family.

At this period, the Merchants of the English Company, who resided at Visakapatam, proposing to build a cottee to carry on their commerce on the sea-coast, made proposals to build a cottee,† (factory,) seeking there permission to form their establishment in some convenient place of the coast under their protection. The poligars agreeing to their request, ceded the four undermentioned villages, together with Madras Coopum, on condition of paying them 1200 Madras pagodas, besides the additional expence of supporting the holy pagodas.

This grant and conditions were engraved upon a gold plate, (for preservation as a record,) which they delivered to them with authority to establish a daroolzarib, (or mint house,) for coining carak or Madras pagodas.

The four Villages then granted were, viz. :-

 Mouza Madras Coopum,... {
 They built a cottee on the land of this village, which is named Madras.
 Ditto Chenak Coopum,... {
 On the land of this village is situated Mootaul and Pagdalpetta.
 The soil of this village is made use of to make salt.

In the Fusly year 1056, Streeranga, Rayel[‡] was dethroned, and his A. D. 1647. dominions possessed by the Mussulmans. In the reign of A. S. 1569. Sultan Abdool Hussain Jaanum Soobah, the English merchants having lately built a cottee, (or house of commerce,) now wished to build a fort; for this purpose they despatched Cassa Vee Runna as vakeel (or ambassador) to the presence of the aforesaid Jaanum Soobah. On his arrival, the Soobah being informed, by the address of the ambassador, of the wishes and expectations of the English merchants, taking their request into his serious consideration, he bestowed his perwanna, granting the above four villages as an *enam* (free gift) to them, with

* The ancestor of the present Calastry Rajah.

+ Cottee, a house of commerce or factory, different from cotta (tell,) a fort.

[‡] This Streeranga-Rayel seems to have been one of the kings of Chandergherry, perhaps the last. This is the only branch of the royal family of which I have not yet got a regular account of succession, but I have hopes of getting it; the last of them had abandoned Pennaconda some years before (1804.) List of their successions have been since obtained, (1810.) permission to erect a fort, and to establish a daroolzarib, (or mint house to stamp) on condition of their paying yearly into his treasury, the sums of 1200 Madras pagodas. He then dissmissed the vakeel, honorably, with the privilege of palanquin, umbrella, biruck varnava,* and toodom. Afterwards the English merchants, agreeable to the permission of the Jaanum Soobah, began to build a fort in the Fusly A. D. 1650. 1059; at this time an officer named Podellee Lingapa, had A. S. 1572. succeeded to the office of Soobadar, and managed the revenues of the Soobahs of Seera, Cadapa, and Canchee.

In the forms of the Mussulman management of revenue, the term *caumil* is applied to the amount of revenues collected and accounted for to the administration for the time of the Rayels, and not attached to districts. At this time their revenue was not included in the *jumma caumil* of Podellee Lingapa; but Tripalkanee was granted as a jaghire under the management of Podellee Lingapa under the government of Islaum, and is therefore included in the *jumma caumil*, or rental; therefore this village was engaged by the above vakeel dur-A. D. 1685. ing his life, and upon his death, it was assumed by the A. S. 1607. English Company in the Fusly 1094.

In the Fusly 1095 and Achaya Cycle year, Zoolfucar Cawn, distin-A. D. 1686. guished by the title of Cawn Bahauder, advancing into this A. S. 1608. country with an immense force, and continued for 12 years employed on the expedition and siege of the fort of Gingee.[†] At last having reduced that fortress, he appointed Davood Cawn to govern the Carnatic. During his management, the English Company cultivating friendship with him, obtained permission to coin silver rupees.[‡] They also about this time got the following villages from the district of the amildar of Poonamellee, viz. :--

Caamil. Pags. 325 0 1. Mouza Agamoor, • • • .. 40.0 180 2. Ditto Parsewauk, 5 • • 400 10 3. Ditto Tandewauk, ... • • •

* Several kinds of military music, significant of military distinction.

+ Gingee was at last taken in the Fusly year 1110, or A. D. 1700, A. S. 1623.

[‡] The translator, (a Hindoo), had rendered the Arabic words for *Mint* CAROOL ZURUB, (literally *Stamping*, *house*,) a mint to strike gold coins. It seems from the context that the English had the privilege of coining gold only, and hence his error, which is set right.—EDS.

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In the Fusly of 1127, the English Company, with the consent of A. D. 1717. Sadaoola Cawn, then Soobedar, and the amildar of A. S. 1639. Poonamellee, received the following villages of the Poonamellee district, viz.:--

					Cuumu.		
1. Mouza Trivatore,	•••	•••	•••	•••	Pags.	220	6
2. Ditto Saut Kaud,		•••				232	6
3. Ditto Connewauk,	•••		•••	•••		100	0
4. Ditto Salvara,			•••	•••	•••	93	8
5. Ditto Loongombauk,				• •	•••	260	8

In the Fusly of 1149, in the management of Sufdar Ally Cawn, A. D. 1739. the English Company got the following villages from the A. S. 1661. Poonamellee district, viz.:--

						Caan	nu.
1. Mouza Brumapore,	•••			•••	Pags.	114	12
1. Ditto Sat Coopum,		•••				125	6
2. Ditto Adayavaram,	• •	•••		•••		205	6
4. Ditto Poodpauk,						105	3
5. Ditto Vepary,			• • •	•••		25	3

These five villages were granted to the English Company during the Government of ______, Governor of Madras. At the same time the above Cawn granted a village called Coodpauk, (now called Chintadry-petta,) as a jagheer to the Governor's interpreter, which he enjoyed during life, when afterwards his jagheer was assumed by the Company.

In the Fusly 1157, the French came with an armament and captured the fort from the Company, after which, in the Fusly of A. D. 1744. A. S. 1745. 1158, the English Company brought troops and recaptured A. D. 1666. A. S. 1667. Hy. During the troubles of these captures, the Company lost their vouchers and purwannas for the grants and jagheer, being plundered by the enemy.

Afterwards, the Nabob Shahmut Jung Bahadoor and Sampat Row granted Mylapore and some other villages, together with the customs and sayar, viz. :--

							Caamil			
1.	Mouza Mylapore,	••		•••	P	ags.	241	8		
2.	Ditto Mamalom,		•••	•••			710	0		
	Ditto Alatore,	•••	•••	••			113	14		
4.	Ditto Numdumbauk,						126	4		

		Caa	mil.
5. Ditto Pallagarrum,		668	3
6. Ditto Chennamongol, with the customs,		•••• ,,	slø,
7. Ditto Revenue of the village,	138	$\left\{ \begin{array}{c} 6 \\ 10\frac{1}{2} \end{array} \right\} 2,265$	1
Customs of the Mint,	2,136	$10\frac{1}{2}$ $\int 2,200$	2
8. Ditto Settee Cuddee		14	4

In the Fusly 1160, in the time of governor Chanderson, when Nasir Jung advanced into this country, the Nabob Mahomed Ally Cawn bestowed the whole district of Poonamellee in jagheer on the English Company.

In the Fusly 1166, during the government of Lord Pigot, Mahomed A. D. 1752. Ally Cawn then granted the Nabob to the English Com-A. S. 1674. pany, and also ceded the district of Saat Maganum.

In the Fusly 1173, and in the month of Alpissee, by the advice of A. D. 1759. Meer Hassadoola Cawn, Mahomed Ally Cawn granted in A. S. 1681. jagheer the district of Canchee and some other purgunnas, amounting to four lacks of pagodas.

APPENDIX No. 2.

Extracts from Historical Documents, confirming the Account of the expulsion of the Hindoo Naiks of Tanjore, by the Marhatta Chief Eckojee.

MS. Madura History, page 24.-Chokanaad Naig, 8th King.

About this time, *Chengamaul-Daus*, who had fled to *Sátar*, brought from thence the king of the Marhatta's brother, *Ya-ko-jee*, with 2000 horse, who entered Tanjore without opposition; but finding that the kingdom was fertile, and that *Chengamala-Daus* had no people of his own, *Ya-ko-jee* anxious to possess himself of the sovereignty, sought au opportunity to assassinate him. Having smelt of this plot, he escaped to Mysore, where he led an obscure life.

APPENDIX No. 3.

Extract from the Naraputty Vijium, page 30, a Tamul MS.

Afterwards the king of the Bosalla Dasum brought abundance of troops of all kinds from the court in the Northern division, conquered Compa-Goudoo; the Rajah of Magadee, forcibly took possession of his capital Magadee and another city called Bengooloor, and there established himself in the government of that conquered country.

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At this time, a Raja named Veejaya-Ragavarauze of the Ballega caste ruled at Tanjore, whose ancestors were established in that state by Kistna-Rayel on a very honorable footing. The king of Madura proud of the strength of his army, suddenly marched against him, put Veejaya-Rauze to death, and returned after this victory to his capital. The son of Veejaya-Ragavaraja, named Chengamala Naik, sent his minister as ambassador, who made all possible haste to Bengaloor, where he came into the presence of Ekojee, and represented thus: I am the chief minister of Chengamalla Naik, king of Tanjore, who is my lord, and being attacked and deprived of his country by the lord of Madura, has sent to request your aid and support with all your forces to conquer his enemy, for which he undertakes to defray the field charges of your troops.

Ehojee upon this representation of the minister, consented to his proposal; he then sent to Chickadava-Raja, signifying his having engaged to go to the assistance of Tanjore, and the necessity that he should be in condition to fulfil his engagements to the utmost in every sense. Ekojee, therefore, for a sum sufficient for the disbursements of his troops, made over to Chickadava Raja, his district of Bangalore for 1,200,000 rupees, and on receiving payment thereof, he marched. On his arrival near Tanjore, he wrote to the lord of that city to discharge the arrears of 5000 of his cavalry; the demand was complied with, and he received sufficient to pay his troops for one month. Then under the pretext of bringing more forces, he returned from thence back, and having intelligence of the state of Aranee, he suddenly attacked that fort, got possession of it, putting the garrison to death, and placed Vadajee, one of his officers there, with a force to maintain it. He then went to Tanjore with only about 200 horse, and represented to the Tanjore lord, that his troops being in arrears to a very large amount, they had refused to obey his orders until their balance was discharged; but if he would now advance him sufficient to discharge the balance of two months, he swore to bring his whole army to reduce his enemy, and to obey at all times his commands. He then took an oath at Coombaconum in the divine presence of God, upon which Chengamalla Raja paid him the money he wanted, requesting him to hasten by all means to march against Madura; but the ungrateful Ekojee, who had privately leagued with the Madura king, then requested, that having on his account and for his service made over his country to Chickadava Raja, and being obliged to carry his family along with him to the field, he would grant him a place where they might reside in security in his absence, as he was preparing to march within a few days in a fortunate time towards *Madura*, to attack the enemy; whereupon, with the consent of *Chengamalla Raja*, being admitted with all his forces into the fort, he immediately placed his guards on all the places of importance, and then intimidated the Raja so much by threats, that if he did not leave the place, by force to deliver him up to his enemy, the king of *Madura*, that after this *dreadful** conversation, *Ekojee* forced him to leave the city with only the dress he wore, leaving all his property behind, together with all the royal family, who on some private carriages escorted by his troops, were sent out of the district.

This great princet not able to evade this misfortune which was destined by God, submitted to this degradation, and in this poor abject condition, proceeded with all his family to *Streerangapatam*. Being ashamed to behold *Chickadava Raja*, he remained privately in a house of one of the inhabitants, which the Raja being informed of, came to this lord, consoled and encouraged him not to be uneasy for the loss of his fortune, and granted him his protection, assigning some villages for his maintenance.

APPENDIX No. 4.

Translation of an Extract from a Tamul MS. History of the Marhatta Family of Tanjore, containing an account of the revolution by which the Marhatta Bhoosla Family was established at Tanjore by Echojee.

Now the descent of *Echojee Raja* who conquered Tanjore, has already been fully mentioned in the history of the *Bhosala Vamshum.*[†]

This Echojee Rajah being the fourth of that name, when he was ruling at Bangalore the second time, received a letter from Ali Abdil Shah of Beejapoor, mentioning, "that Veejaya-Ragava Naiker of Tanjore being besieged by the Trichinopoly Naikers, a vakeel has come to me from Tanjore on that account; therefore we send two viziers, named Cauddil-Alas-Khan and Abdul Ali, together with some troops, and you should also go along with them with your army, attack the army of the Naikers of Trichinopoly, and drive them away.

^{*} Literally translated.

[†] When in Mysore in 1807, enquiry was made in vain for the descendants of this family. It since appears, that a person belonging to them, or claiming to be such, was noticed in certain communications to Government in 1805 from the Southward.

[‡] Bhonsla-Vamshum, or the Generation or Race of the Bhonsla Family.

You must then put the Tanjore people under arrest* till they collect the balance of the *Paudshah's* tribute.[†] You should also collect the amount of the expences of the army, and send it to the presence."

On reading this letter, he immediately left Bangalore fort in charge of Chaualakaattee-Soorya-Row, and marched along with the two viziers to Tanjore; in the way he took the fort of Arnee, thence he marched to Tanjore, defeated the army of the Naikers, and drove them away. He then laid the mogalloo on Tanjore, and encamped at Treemoollavoel, in order to collect the money of the tribute, and the expences of the armies; keeping the two viziers, Caudil-Alas-Khan and Abdul Ali, without the fort to fix and collect the amount of the money.

It was while this Rajah was encamped at *Treemoollavoel* at this A. D. 1674. time, that his second son *Surpojee-Rajah* was born, the third person of this name in the Salleevahan Sakam, 1596, in the Cycle year *Rachasa*; these circumstances have been already mentioned.

Veejaya-Ragava-Naik and his relations of Tanjore delaying to pay the money of the tribute, and being involved in contentions among themselves about the supremet authority in the state, disputing who was chief, dismissed the vakeel (who had been lately sent to Beejapoor,) with the view of deceiving the two viziers, who resided without the This intrigue and deception being resented by his minister§ fort. and the vakeel, they were discontented, and represented to the two viziers, "that the Naikers would not listen to their advice, and evinced much weakness and folly in their conduct, which was now so bad, that they were likely to ruin the country; that they were at variance with each other, and were not able to manage the Samstaan; that they (the viziers) ought therefore to take the country under their direc. tion, as the Naikers, to the number of 15 or 20 people, were guarrelling without any substantial reason, and ready to destroy each other; that the people were no longer under the command of the Naikers, and no longer respected their authority, and designed to seize on the fort, and to cut off the Naikers within two days; and recommended therefore to them to rule the kingdom, (or assume the government.")

^{*} Arrest, mogalloo, (Tam.) The original runs literally "You will lay the mogalloo on the Tanjore people till, &c. &c." The Malabar mogalloo seems to be the derna of the Northern Hindoos.

[†] Peishkush.

[‡] Original, " Am I great, or are you great ?"

[§] Muntree, the chief minister.

The two viziers came to no resolution for two days, while they examined into the accuracy of these representations, which they found were very true, and that all the officers of the country were speaking in the same manner, (or held the same sentiments.) The viziers then replied to the vakeel and chief minister, " we cannot do this business ourselves; but we will give you a letter which you should both carry and deliver to Eckojee Rajah, who is now at Treemullavoel, and you can bring him, then all the business will be settled." Accordingly the vakeel and ministers took that letter, and going to Treemullavoel, delivered it to Eckojee Rajah, acquainting him of the misconduct of the Naiker's warriors, and relations of the family who were in Tanjore fort; thereupon Eckojee Rajah set out secretly with some of his troops to Tanjore, and after conferring with the two viziers, went into the fort of Tanjore, accompanied by them in the Salleevahan Sakam year 1596, in the cycle Rachasa in the month of Mausee in the day of Suptamee (or 7th) in the Sookala-Putchum. On that day he came by the road leading to the gate of Tanjore fort, thence now called Ali-Durwaja; after advancing a short way, the Naik, his relations, their followers and warriors from the Aramana (or palace) advanced to oppose the Rajah sword in hand. In this conflict the Naik of Tanjore and seven or eight of his cousins were slain, the remaining Naikers fled in great confusion, whereupon the fort remained under his command.

Then the two viziers composed the troubles which still in some degree prevailed in the fort, and then came out by the East-gate and encamped without the fort; as they came out by this gate with victory, therefore it is called *Futteh Durwaja*. The Rajah then delivered the fort into the charge of the late chief minister, and went and encamped without the fort with the two viziers.

The Rajah then asked liberty of the two viziers to return to Bangalore, but they earnestly requested him to stay until their own differences were adjusted, for they were disputing to which of them this country should now belong.

Affairs were thus in suspense for two months, when intelligence arrived that Aurungzebe having conquered all the several Padshahs of Deckan, except Beejapoor, there was reason to suspect that the government of Beejapoor also must soon fall. Abdul-Ali and Cawdil Alas Khan therefore considered if they remained disunited and quarrelling among themselves, after Eckojee Rajah's departure they could not preserve the fort; that the Naikers of Trichinopoly were valiant men; and even that *Ali-Adil-Shah* would never permit of this country falling into their possession. On the other side, that *Eckojee Rajah* was a warrior fully able to reduce the people of Trichinopoly; that his brother *Seevajee Rajah* also was a man of such great power in his country, that *Ali-Adil-Shah* was not able to contend with them; therefore, they resolved that *Eckojee Rajah* was the fittest person to rule the kingdom, who would from gratitude pay them due respect and attention for such a service down through future generations.

Having thus considered and determined in their mind, they acquainted *Echojee Rajah* of their sentiments, and satisfied him (or prevailed on him) to acquiesce in their proposals.

Soon after Echojee Rajah was seated on the throne of Tanjore in A. D. 1675. the epoch of Salleevahan Sakam 1597, in the Cycle year Nala, in the month of Chittry; he then sent to Ali-Adil-Shah of Beejapoor a nuzzur (or present) adequate to his rank, and wrote him a letter, signifying that he retained these two viziers with him, that the Padshah might not conceive any suspicion of their fidelity. The Padshah on receiving this letter and present was extremely pleased, and in reply addressed him a sunnud, empowering him to enjoy the country of Tanjore from generation to generation; in this manner he wrote a sunnud, and sent it with many kinds of valuable cloths, &c. as presents to Echojee Rajah.

Afterwards the people of Trichinopoly came to fight against the Rajah, who repelled them, and obtained from them a written grant of the village of *Sondala-Mal*, "for the expense of *betel* and *nuts.*" He also fulfilled his engagements to *Cawdil Alas Khan* and *Abdul-Ali*, and continued to rule the kingdom.

In the epoch of Salleevahan Sakam 1598, in the cycle year *Pingala* to *Echojee Rojah* was born his third son *Tookojee Rojah*; these three sons were by his eldest wife *Tippa Bauhee Saib* of the *Yengala* caste, and by his younger wife, *Annoo Bauhee Saib*, of the caste of *Mola*, he had a daughter. He also had nine concubines; of them were born seven children, namely:—

Of these seven sons, the eldest *Chundraban* was a great warrior. Altogether *Eckojee Rojah* had ten sons. After ruling for some time he departed this life in the Salleevahan Sakam 1604, in the cycle year *Rootrotcaury*; his eldest son *Shahajee Rojah*, (the third of that name,) being appointed to succeed to the government.

APPENDIX No. 5.

Literal Translation from the Memoirs of Sheevajee, of the conference between Sheevajee and his brother Eckojee of Tanjore.

CHAPTER LXXXII.

After this, (the taking of Chenjee,) on the other side of Chendee, the army encamped at the village of Ardér near Treevundee, whence a letter was sent to Echojee Rajah, saying, " I have not met your Majesty since I was born, desirous of a meeting, I am come into your neighbourhood, and beg that you will pay me a visit," thereupon Echojee Rajah attended by Juggunath-Punt-Diwan and his army came and waited upon Sheevajee Rajah in a most respectful manner. Charity was largely distributed, afterwards they both eat out of the same dish. which they continued to do daily, and conversed together in the presence of Ragoonath Narayen, and Dittajee Punt Vakneess, Havildar, and Bál-Prubhoo-Cheetneess and Kumbeer-Row Shenaputtee and Anajee-Ragoonath Mujmoondar. Sheevajee Rajah began to say. "Give to me the half of the Chendaverry* dominions and take you the other half." Echojee Rajah answered, "You must then give to me the half of the domains acquired in the Désh,† (country of Marhattas)." Sheevajee replied, "Our father acquired nothing in the Désh." Ekojee Rajah rejoined, "Formerly territories were acquired by our father in the Desh, deliver the half to me." Sheevajee repeated, "Our senior acquired nothing in the Désh." Thus were words and disputes carried on for fifteen days. At last Echojee Rajah declared, "We must fight for it, within fifteen days I shall complete an army and call upon you; prepare yourself." Having so spoken, he set off in anger. Sheevajee Rajah for the sake of peace followed out of his tent, but was not heard by Echojee, who mounting his horse rode on to Chendaver. As far as Chendaver, Sheevajee Rajah ordered these officers to go in his escort ; namely, Humbeer, Row-Shenaputtee and Manajee Moré and Roopájee Bhonsla, and Anajee Rogoonath. They went as far as Chendaver.

* The district of Tanjore.

⁺ Alluding to their first acquisition of Poona and Poorender, which in fact were not acquired by Shahjee, but descended from his ancestors, the dispute, therefore, here turns upon the point whether the acquisitions of a father was to be divided among his sons: leaving the ancient patrimony for the eldest according to Sheevajee's assertion," or " that the whole lands without distinction possessed by a person should be equally divided among his sons." The former distinction is well known in the Laws of Scotland under the distinction of *Heritable Property*, or Hereditary, and of conquest or personal estate and property. where they were presented with cloths and ornaments as marks of distinction, and thence they took leave.

CHAPTER LXXXIII.

Thereafter Sheevajee Rajah leaving Ragoonath Punt and the Shenaputtee with the army, went to the Désh (native land), accompanied by Dittajee Punt, and by Bal-Prubhoo-Cheetneess and by Manajee Moré Panch-Hazaree (of 5000,) Anajee Moré and Annund Row, Panch-Hazaree, and he arrived at Punhala.

The army behind was attacked by *Echojee Rajah's* troops, consisting of twenty thousand cavalry and fifty thousand fire-lockmen, and commanded by *Jaggunath Punt Diwan*, by *Bheemajee Rajah*, by *Roybanjee Rajah*, and other officers of rank. These armies fought for fifteen days. One day the cavalry (of *Sheevajee*) charged the four sides and killed two thousand infantry; disorder ensued (in Eckojee's lines); *Jaggunath Punt* and *Bheemajee Rajah* and *Roybanjee Rajah*, the highest officers, were taken prisoners; the infantry fled; the army of *Chendaver* was destroyed; a thousand troopers and bramins and Marhattas were killed. On *Ragoonath Punt's* side, (*i. e. Sheevajee's*,) five hundred troopers lost their lives in the victory.

CHAPTER LXXXIV.

After that a treaty of peace was concluded, by which the half of the country north of the Cavery, including the forts and palaces of $B\dot{a}/\dot{a}$ -poor* Kolar, Maharaj Gudd, and Juggdév Gudd, and Carnatic Gudd and others were ceded to Sheevajee. The Kamaveeshdar of Arnee, named Odajee Bháshur, who had eight sons, viz. Soobén-Row and Neevas-Row, and the rest had been gifted by Shahjee Rajah with a district including the fort of Vunneedoorg under these new cessions. This gifted tract or enamt no person molested.

The fort of Veloor fell (to Sheevajee's troops). In that quarter Ragoonath Narayen remained at Chundee and Humbeer Row Shennaputtee returned with the army towards their own country. In the Carnatic a territory (yielding an annual revenue) of fifty lacs of huns was acquired.

* Ballapoor and Colar are well known to be above the Ghauts; the other guddies are in the Payen Ghaut, or Barramahl, and we see Bangalore is not included, which confirms the account of its being made over by Eckojee to the Mysore Chief, previous to his marching to Tanjore.

+ The Arnee jagheer has been a matter of discussion of late years; a person in possession of heritable property cannot divide it; but the latter, as his own acquisition or conquest, he may divide or bequeath as he thinks proper.

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Circar Beejapoor, Carnatic, -55-Purgunnahs or Mahals.

Political Events in the Carnatic, from 1564 to 1687.

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A		

	Rupees.	1,57,60,329	3,28,33,546	The second	4,85,93,875			
Arcot.	Carnatic, Hydrabad, Payen Ghaat, from Guntoor to the Coleroon, South and West to Amboor. Southern Circars of Tanjore and Trichinoply, (including Ma- dura and Tinnevelly.) (Doubtful whether the tribute of Travancore as a dependency of Madura be included.)							
				med Ali Khan's Family as Na-	bobs of Arcot			
	Rupees.	47,17,386	49,69,624	5,25,61,369		6,19,48,379		
Serah.		Carnatic, Balla Ghaat, Beejapoor, Carnatic, Balla Ghaat, Hydra- bad, including Gurramconda,	Gooty Sidhout and Gandicot- ta, &c., but not including Sa- nore nor Adoni,	Zemindars dependant on Beeja-			Exclusive of Malabar which is not registered.	
				Hy- S Na-	bobs of Serah.			

APPENDIX No. 9.

PROCLAMATION AGAINST THE SLAVE TRADE.

At a Consultation, present William Gyfford, Esq., Agent and Governor, &c. &c.

An order in English, Portuguese, Gentue and Malabar, for preventing the transportation of this country people by sea, and making them slaves in other countries, this day was read and passed, and ordered to be hung up in four public places of this town; the contents are as follows:

Whereas formerly there hath been an ill custom in this place of shipping off this country-people and making them slaves in other strange countries; we therefore, the present Governor and Council of Fort St. George, have taken the same into our serious consideration, and do hereby order that for the future, no such thing be done by any person whatsoever resident in this place ; and we do hereby also strictly command all our officers by the water-side, whether they be English, Portuguese, or Gentues, to do their utmost endeavours to prevent the same, or else suffer such punishment either in body or goods as we shall think fit to inflict upon them; and if any person shall hereafter presume clandestinely to do anything contrary to this our order, by shipping such slaves of this country, and it be proved against him, he shall pay for every slave so shipped off or sent away, fifty pagodas, to be recovered of him in the Choultrey of Madrasspatam, one-third for the use of the Honorable India Company, one-third to the poor, and onethird to the informer. Dated in Fort St. George the 9th day of November, one thousand six hundred and eighty-two.

(Signed) WILLIAM GYFFORD.

Fort St. George, 1682, Monday, 13th November, 1682. Note on the Osseous Breccia and Deposit in the Caves of Billa Soorgum, Lat. 15° 25', Long. 78° 15', Southern India. By Captain NEWBOLD.

These caves are situated in hills composed of the diamond limestone, and had not hitherto, as far as I can discover, been visited by any European previous to my stumbling upon them. From the roofs of some depend clusters of stalactites, while the sides and floor are encrusted with stalagmite, covered with an ammoniacal and nitrous soil of little specific gravity, brown in colour, and apparently the result of decomposition of the filth of bats and other small animals that lurk in the recesses.

The mouths of the caves are from 46 to 60 feet high; but diminish before many feet are traversed to semi-circular channels, or fissures of no great length, which it is necessary to traverse on hands and knees.

Among the specimens sent, will be found a gypseous bone breccia, a red indurated marl or mud, somewhat resembling that of the celebrated Kirkdale caverns in Yorkshire, some fossilized bones of small animals with a few fragments of the bones and tusks of animals of larger dimensions, many of which were found at the depth of 18 feet below the floor of the caves, imbedded confusedly in a hard gypseous rock and in red mud, lying under a crust of stalagmite, which is covered by the light animal soil before-mentioned.

I am sorry I cannot send the Society duplicates of the more perfect bones and tusks of the larger animals, which I have reserved for examination in Europe. The bones are broken, but not water-worn : those of the smaller animals are in great quantities.

The specimens now presented, poor and insignificant as they are, may be regarded with some interest as the first offerings on the Society's table from the caves of Southern India, of a deposit analogous in mineral composition, under a similar crust of stalagmite, to that in which Buckland first discovered some of the then most remarkable of his *Reliquæ*, which consisted of the remains of about 300 hyænas, the ox, young elephants, hippopotamus, rhinoceros, horse, bear, wolf, hare, water rat, and several birds : with the dung of hyænas nearly hard as bone, and composed principally of the same substance, phosphate of lime, all confusedly mixed in a loam or mud, or dispersed through the crust of stalagmite which covers it.

1844.] Note on Osseous Breccia and Deposit, &c. 611

From the circumstance of there being no apparent existing cause sufficient to account for the presence of layers of earth, mud, and breccia under a crust of stalagmite, to the depth of 18 feet and more, (for I did not succeed in getting to the solid rock in two caves at this depth,) and the surface of which is in one of the caves 8 feet above the present highest water level of the land in the vicinity, I am inclined to refer the deposit to the tertiary period, probably the plecocine division, in which are classed the osseous breccias of the Mediterranean, the cave deposits of Kirkdale, Sicily, and Australia.

It is highly probable, that a more extensive search into the deposits of the caves of Billa Soorgum, than my avocations would permit, might lead to far more interesting results than are now before the Society; and slight as the clue now afforded may be, it should not be altogether neglected by observers in other parts of India, who may happen to be in the neighbourhood of caves and rock fissures, particularly in those caves in which the floors are covered by stalagmite.

I embrace this opportunity of calling the attention of observers, who may have the opportunity, to the splendid discoveries made by the present talented Secretary of the Geological Society, Mr. E. Forbes, in dredging the bed of the Ægean. Similiar researches in the vastly more prolific bed of the Indian Seas would amply reward their labours.

List of Specimens.

No. 1. Osseous breccia.

- 2. Red marl or mud imbedding fragments of bones.
- 3. Irregular cylindrical bodies.
- 4. More like the dung of animals than any specimen of stalactite; they are found in the mud and loam mixed with the bones.
- 5. Fragments of bones and tusks, and small bones in an integral state found in red mud and loam, 18 feet below surface.
- 6. Stalactite, 7 stalagmite, 8 grey as in like layer.

Notes on the Kasia Hills, and People. By Lieut. H. YULE, Bengal Engineers.

A traveller approaching the Kasia Hills from the south, must in spite of the tameness of their general profile, be struck by the singular feature of a high sandstone precipice, which runs like an artificial scarp for miles along their face, with its upper crest straight, sharp and almost perfectly horizontal. Even when the precipice is interrupted for a space by a jungly acclivity, this sharp crest continues equally defined by the sudden cessation of the forest at its level.

As we enter the first low range of limestone hills, if instead of following the beaten road to Cherra Poonjee, which mounts by bold staircases and zigzags to the table land, we turn aside to track the Wa-lingtia, one of the clear hill streams which so soon are to degenerate into dull Bengallee nullas, we shall be better able to judge of Kasia scenery than those, who keeping the highway are so apt to speak disparagingly of the beauty of these hills. For two or three miles the path lies in a narrow gorge. Rocks or woody steeps rise so directly from the water as to leave but a narrow footing. You see by the constantly recurring rapids, how quickly you are ascending. Sometimes, however, you find a broad reach of deep, still water, swarming with the black backs of large fish. In an angle of the rock is perhaps a Kasia fish-trap. An enclosure of bamboos and matting has its narrow entrance fitted with a trap-door, the fisher scatters his bait within, and sits concealed in a little hut, watching till the fish swarm below. He then slips his cord, the door runs down, and he proceeds to land his victims at leisure. Issuing from the defile the river branches on the left, from which flows the smaller stream, (the Wa-lingdeki,) opens the magnificent valley of Mausmai. It is of a horse-shoe form ; two-thirds up its steep sides still runs the clear precipice of some eight hundred feet in height, with its even crest, seeming to bar all access to the upper regions. Over it, side by side, with an unbroken fall leap five or six cascades. Through the great height, the white waters seem to descend with a slow, waver-The path through the valley is shaded by groves of the ing motion. orange and citron, the jack and the betel-palm, mixed with stately forest trees, many of them entwined with pawn, and here or there a huge India rubber tree or banyan. In their shade the pine-apple grows

in profusion; all seem like the uncultivated gifts of the Creator; but here and there water-pipes of hollowed betel trunks, carrying a stream for several hundred yards along the hill side, shew that they are not altogether untended. After many ups and downs, we arrive again at the river which divides the valley. The bridge by which we cross is worthy of description, as I believe no account of any thing similar has yet been published.

On the top of a huge boulder by the river side, grows a large India rubber tree, clasping the stone in its multitude of roots. Two or three of the long fibres, whilst still easily pliable, have been stretched across the stream, and their free ends fastened on the other bank. There they have struck firmly into the earth, and now form a *living bridge* of great, and yearly increasing strength. Two great roots run directly one over the other, and the secondary shoots from the upper have been bound round, and grown into the lower, so that the former affords at once a hand-rail and suspending chain, the latter a footway. Other roots have been laced and twisted into a sort of ladder as an ascent from the bank to the bridge. The greatest thickness of the upper root is a foot, from which it tapers to six or eight inches. The length of the bridge is above eighty feet, and its height about twenty above the water in the dry season.

This bridge was constructed by the people of the village of Ringhot, and forms their communication with Cherra during the rains; the present generation say, it was made by their grandfathers. This was the first and most remarkable bridge of the kind that I saw in the Kasia Hills, and I supposed it to be unique, perhaps half accidental. But, I afterwards found it to be an instance of a regular practice, and saw such bridges in every stage, from that of two slender fibres hung across the stream, to such as I have tried to describe above, and there are not less than half a dozen within as many miles of Cherra. One* I measured ninety feet in clear span. They were generally composed of the roots of two opposite trees, (apparently planted for the purpose), bound together in the middle.

On the Wa-lingtia, or larger branch of the river, whose course we have traced, are several other remarkable bridges. One on the suspension

^{*} Shewn in Plate I.

principle, across a precipitous gorge on the road between Cherra and Tringhai, is composed of long rattans stretched between two trees, at a height of forty feet above the river in the dry season. Yet this bridge, when I visited it, was impassable from damage done by the last year's floods. The footway was a bundle of small canes lashed together, and connected with two larger rattans forming hand-rails, but these so low and so far apart, that it must be difficult to grasp both together. I could not estimate the length of this bridge much under two hundred feet between the points of suspension. The Hill Kasias are afraid to trust themselves on it, but the Wars, or men of the vallies, cross it drunk or sober, light or laden, with indifference and security. Still further up the river, and near the little village of Nongpriang, immediately under Cherra, is another specimen of Kasia engineering and ingenuity,-a bridge of about eighty feet span, composed entirely of strong bamboos bent into a semicircular arch, affording a sound footing, and firm rails for the hand.

But to return to our tour of the valley of Mausmai. Quitting the river we commence ascending, by a steep and rugged path, one of the narrow spurs that descend from the foot of the precipice which girds the valley, at a point where it is much diminished in elevation. Soon leaving behind us the region of pine-apples and betel nuts, two hours hard climbing brings us to the foot of the cliff, here broken in four steps of twenty to thirty fect each in height, which we ascend by as many bamboo ladders. These are somewhat ricketty, and at times exhibit a woful hiatus among the rungs. From the summit of the ladders a half hour brings us to the table land within two miles of Cherra Poonjee. This table land, covered with naked undulating hills, and at intervals of a few miles interrupted by deep and sudden vallies, is the general characteristic of the country as far north as the Barapani; a distance of fifty miles. Beyond this, the region towards Assam sinks into a tract of low hills covered with dense jungle, and abounding in elephants and malaria. On the east the Jaintia country presents great tracts of pasturage, dotted with clumps of fir, and in parts a park-like forest scenery of stately oaks and firs form a noble foreground to the distant view of the snowy mountains seen rising behind the black Bootan hills, far beyond the valley of Assam. To the westward of Cherra, the Kasia country may be considered to extend between forty and fifty

Plate 1. MATHIE Bridge at Temshung Hain Samles prime

1844.7

miles, being separated, according to common report, from the Garrows by a dense and unpeopled jungle.

A traveller from the south first meets the fir tree in the ravine of the Boga Pani, eighteen miles north of Cherra, but there weak and stunted. The greater part of the country north of this is sprinkled with firs in natural clumps, and sometimes (in the vicinity of iron works) in artificial plantations. In the descent to the Bara Pani the tree attains its utmost height, but in the woodlands of Jaintia, it is found in greatest girth and beauty; not as a tall mast, but gnarled like the oak, and spreading like the cedar, as we have seen some of the Patriarchs of the Highland forests. On the route from Cherra to Assam the oak is poor and scrubby, scarcely recognizable save by its fruit; but to the eastward, though a near inspection shews a difference in the leaf, it has in character, colour and outline, perfectly the aspect of the English oak.

In the deep vallies of the south the vegetation is most abundant and various. Among the most conspicuous species are, the great India rubber tree scattered here and there in the stony bottoms; the rattan winding from trunk to trunk and shooting his pointed head above all his neighbours; higher up the stately sago palm with its branching arms; and in some shady damp nook, shut out from sun and wind, the tree fern with its graceful coronet. Of bamboos there are whole forests, and a difficult matter it is to force a path through their thick basketwork. Of this most useful plant the Kasias discriminate seven species by name. The cowslip, polyanthus, honeysuckle and ivy, with many other plants near akin to old familiar friends, abound in different parts of the higher hills, and the common English rag-weed (or ben-weed of Scotland,) not the least fertile in home associations, is plentiful at Cherra.

The most remarkable phenomenon of any kind in the country is undoubtedly the quantity of rain which falls at Cherra. On a certain occasion thirty inches of rain is said to have fallen at Genoa in 24 hours, and the statement has been doubted; but no one who has measured the amount of rain in the Kasia Hills, can doubt the possibility at least of such a quantity. It is with some hesitation that I write it, but the unexceptionable mode of measurement, and the many times that I have seen my friend (still resident at Cherra,) who registered the fall, take these remarkable gauges, leave me no room to doubt. In the month of August 1841, during five successive days, thirty inches of rain in the 24 hours fell at Cherra; and the total fall in the month of August was 264 inches; or, that there may be no mistake, *twenty-two feet* of rain. The gauge was simply a large glass jar, having a funnel fitted with projecting eaves; and the water was measured morning and evening with a cylinder three inches in depth, of equal diameter with the funnel.

During the heavy rains above-mentioned, the proportion of the fall by night to that by day, was generally about 18 to 12.

The formation of the limestone rocks near Cherra gives rise to a curious phenomenon in the disappearance of streams in their hollows. Sometimes a river vanishes in a cleft beneath a high cliff, sometimes falls headlong into a deep circular hollow and is lost to view, reminding one of the gardens of Cambalu,

> "Where Alp the sacred river ran By caverns measureless to man Down to a sunless sea."

There are at least four such instances in the immediate neighbourhood of Cherra.

Caves are common, as might be expected. In that a little to the east of Pundua, at a trifling height above the plains, in company with two friends from Cherra, I penetrated 1300 paces, without fatigue or difficulty, and others have I believe gone much further. We were compelled to retreat only by a deficiency of oil. Here, says the tradition, a great army entered, bound for the invasion of China, and were heard of no more.

Standing on one of the highest points in the station at Cherra, about sunset, I have seen my shadow cast on a distant bank of white fog, that filled the valley to the eastward, an appearance resembling that of the celebrated giants of the Hartz, and the Stockhorn. The figure was surrounded by a circular iris. The heavy fogs that fill the large valley to the east of Cherra, render this a common phenomenon at sunset. It has since been pointed out to me that any one may witness this on a small scale, in going through the grass at sunrise on a dewy





morning.* Each will see a faint halo surrounding the shadow of his own head.

Another curious appearance at evening, I first observed at Cherra, though I have often since seen it, during the present rainy season, in the Upper Provinces; namely, the distinct imitation of a sunset in the *East*, so far as shewn in long white rays diverging apparently from a point exactly opposite to the setting sun's position.

During the rains of 1842, when the whole Sylhet country below us had the appearance of a sea, several of the dwellers at Cherra were much struck by the appearance of innumerable lights on the surface of the distant plains; far too many to be accounted for by any theory of villages, and fishing boats. The natives said at once that it was "Shaitan," nor were any of the numerous suggestions on the subject, more plausible.

The thunder-storms, in the months of March and April, last for many hours, and are tremendous indeed, but I do not know that they are more so in the hills than below. Several of the houses in the little stations have been struck by lightning, and during a residence of 18 months there was one fatal accident. In a still afternoon, whilst black clouds were sailing up, and for several minutes before the storm reached us, I have heard, as the prophet did on Carmel, "the sound of abundance of rain," a peculiar rustling noise from the rain quarter. It might possibly have been the fall of the heavy drops on the leaves of the jungle, but I once again in a still cloudy day heard the same rustling sound, somewhat like the flight of many birds, directly over my tent, and the Kasias said immediately that rain was coming, but no rain fell.

A most peculiar and striking aspect is thrown over almost every scene in the upper parts of the country, by the various remarkable monumental stones[†] which are scattered on every wayside. These are of several kinds, but almost all of them recall strongly those mysterious, solitary or clustered monuments of unknown origin, so long the puzzle and delight of antiquaries, which abound in our native country, and are seen here and there in all parts of Europe and Western Asia. The

^{*} Most observable in riding across a field of green wheat soon after sunrise .- Eps.

⁺ See Plate II. The illustration is an imaginary group of details from various sketches. It shews a greater variety; but by no means so great a number of monuments as many real scenes exhibit.

most common kind in the Kasia country is composed of erect, oblong pillars, sometimes almost quite unhewn, in other instances carefully squared and planted a few feet apart. The number composing one monument is never under three, and runs as high as thirteen; generally it is odd, but not always so. The highest pillar is in the middle (sometimes crowned with a circular disk), and to right and left they gradually diminish. In front of these is what English antiquaries call a cromlech, a large flat stone resting on short rough pillars. These form the ordinary roadside resting place of the weary traveller. The blocks are sometimes of great size. The tallest of a thick cluster of pillars in the market place of Murteng in the Jaintia country, rising through the branches of a huge old tree, measured 27 feet in height above the ground. A flat table stone, or cromlech near the village of Sailankot, elevated five feet from the earth, measured thirty-two feet by fifteen, and two feet in thickness.

In other instances the monument is a square sarcophagus, composed of four large slabs, resting on their edges and well fitted together, and roofed in by a fifth placed horizontally. In Bell's Circassia, may be seen a drawing of an ancient monument existing in that country, which is an exact representation of a thousand such in the Kasia Hills; and nearly as exact a description of them, though referring to relics on the eastern bank of Jordan, may be read in Irby and Mangles's Syrian Travels. The sarcophagus is often found in the form of a large slab accurately circular, resting on the heads of many little rough pillars, closely planted together, through whose chinks you may descry certain earthen pots containing the ashes of the family. Belonging to the village of Ringhot, in the valley of Mausmai, deep in the forest, is a great collection of such circular cineraries, so close that one may step from slab to slab for many yards. Rarely, you may see a simple cairn, or a pyramid some twenty feet in height, and sometimes one formed in diminishing stories like the common notion of the Tower of Babel, or like the Pyramid of Saccara in Egypt. But the last is probably rather a burning place, than a monument, or at least a combination of the two.

The upright pillars are merely cenotaphs, and if the Kasias are asked why their fathers went to such expense in erecting them, the universal answer is, "To preserve their name." Yet to few indeed among the

thousands can they attach any name. Many of the villages however seem to derive their appellations from such erections, as may be seen from the number commencing with mau, which signifies a stone; e. g. mausmai, the stone of the oath, mau-inlu, the stone of salt, mau-flong, the grassy stone, maumlú, the upturned stone, and a score more; mausmai, the oath stone, suggests that these pillars were also erected in memory of notable compacts. On asking Umang, a faithful and intelligent servant, the origin of the name, his answer was a striking illustration of many passages in the Old Testament. "There was war," said he, " between Cherra and mausmai, and when they made peace and swore to it, they erected a stone as a witness ;" (Sākhi ke wāste, was his expression). Genesis XXXI. 45, "and Jacob took a stone and set it up for a pillar." Genesis XXXI. 47, "and Laban called it Jegarsahadutha : but Jacob called it Galeed [both signifying the heap of witness]. Genesis XXXI. 51, "and Laban said to Jacob, Behold this heap, and behold this pillar which I have cast betwixt me and thee. This heap is a witness, and this pillar is a witness, that I will not pass over this heap to thee, and that thou shalt not pass over this heap and this pillar to me to do me harm, &c."

See also Joshua XXIV. 26. The name of maumlú, the *salt-stone*, is probably of kindred meaning, as the act of eating salt from a sword point is said to be the Kasia form of adjuration.

These large stones are also frequently formed into bridges for the passage of brooks, and most picturesque they often are; there is at Nurteng a bridge of this kind, consisting of one stone thirty feet in length.

It is stated by Pemberton, that *Kai* is the real name of the people, and Kasia the title bestowed on them by the Bengallees. But the truth is the reverse of this. 'Kasi' is the only name which they acknowledge as that of their country and race. The same language, with no substantial difference, appears to prevail in all their villages, though there are considerable differences of accent, &c. especially between the hill and valleymen. It abounds in nasal sounds, and is spoken with a peculiar jerking tone, which has a singular effect to a stranger. In the Coptic language, it is said (Edin. Cabinet Library, Egypt, page 377) "genders and cases are expressed by prefixed syllables, and not by terminations like the languages of Greece and Rome." This is exactly

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true; of the Kasia tongue, genders, cases, numbers, tenses and all grammatical changes, are made by prefixing certain syllables. The masculine prefix is *u*, the feminine *ka*, and the plural *ki*. Thus *u-myau*, a tom-cat, has his feminine *ka-myau*, a tabby, and the plural *ki-mayu*, cats of both genders. This prefix cannot I think be considered an article, as it is attached to adjectives and pronouns as well as nouns, e. g. "*u-tí u-kokaráng*;" *u-bakhrao usím*, that Hornbill (is) a large bird, where the demonstrative, the adjective, and both nouns have the prefix. It is rather the representative of the *terminations* of Latin, German, &c. most of which wear and tear have rubbed from our English tongue.

It is a curious fact, that the people in the broken Hindustani in which they converse with us, *universally* use the future instead of the past tense. Thus to take a very common case, where the ambiguous word "Kal" adds to the puzzle; "Kal ham jaiga," from a Kasia signifies, not 'I will go to-morrow,' but, 'I went yesterday.' I never could break my servants of this blunder.

A great proportion of the proper names of men are quaint monosyllables, as Tess, Bep, Mang, Sor, Mir, Bi, reminding one irresistibly of Sir Walter's Saxon Hig, the son of Snel. But these are generally euphonized by the prefix into Utess, Ubeh, Usor, &c. They also address each other by the names of their children, as Pabobon, father of Bobon! Pahaimon, father of Haimon! The salutation at meeting is singular, "Kublé! oh God." It has been supposed that this is a profane deification of the person addressed. But this scarcely seems agreeable to the blunt character of the people, and I never could ascertain what they meant by it. It is probably an elliptical expression, the literal signification of which is forgotten, corresponding to *adieu*, or like *good bye*, the derivation of which (God be with you) no one thinks of in using it. They have regular numerals on a decimal scale up to hundreds, but their word for a thousand (chi-hajár) seems clearly borrowed from 'hazár.'

In the people perhaps the first thing that strikes a stranger, is their extreme addiction to chewing pawn, and their utter disregard of the traces which its use leaves on their teeth and lips. Indeed they pride themselves on this, saying that "Dogs and Bengalees have white teeth." Every man wears round his neck a thick woollen cord which suspends a fine net of pineapple fibre, a clasp knife, and a pawn-box with sometimes a comb; a little globular silver-box containing lime to smear the pawn, lies in the net which serves as a pocket, and contains as rare a medley as any school-boy's. A traveller arriving at Cherra has asked what were those numerous stains of blood on the road; the innocent traces of Kasia expectoration. Distances are often estimated by the number of pawns that will be consumed on the road. But an answer to the question, "How far?" once given me by a Kasia with a load on his back, left far behind this and all other vague estimates, except perhaps a Bengallee "Bānk pāni." He said it was "*arsin leih*," or *two qoings*; perhaps as far as he could carry his burden with one rest.

The characteristic dress of the people is a short sleeveless shirt of thick cotton cloth, either of the natural colour (unbleached), or striped gaily with blue and red, and always excessively dirty. It has a deep fringe below, and is ornamented on the breast and back with lines of a sort of diamond pattern embroidery, from the edges of which hang certain mystic threads, to the length of which they attach some superstitious importance in purchasing the garment. The shirt closely resembles one figured in Wilkinson's ancient Egyptians, vol. III. p. 345. Over this a few wear a short coatee of cotton or broad cloth, and many wrap a large mantle striped or chequed with broad reddish lines. The latter is their most picturesque costume. Some have a strong penchant for articles of European dress, and their potato merchants generally bring a small invoice of these from Calcutta on their return voyage. I was once entertained by the prime minister of a Raja to the westward, whose sole habiliment, save a cloth round his loins, was a new olive green frock coat (with a velvet collar, if I mistake not). As he threw back the flaps, thrust his thumbs in the armholes, and strutted about, it was not easy to preserve politeness to my host. A very large turban covers the head of the better class; others wear a greasy cap with flaps over the ears, or go bareheaded. The fore part of the head is shaven, and the back hair gathered in a clump on the crown. Chiefs, or the heads of villages generally have a neck-lace of large gilt beads, like our native officers. The women are generally wrapt in a shapeless mantle of striped cotton cloth, with its upper corners tied in a knot across the breast.

The men are seldom tall, generally well made, and shew great strength of limb; of leg in particular. Such doric columns as support a good fourth-part of the Kasia peasantry, are rarely seen in England. By help of these good props many of the coal porters will carry two maunds from the mine to Seria ghāt, a distance of 11 miles. In this muscular developement, they exhibit a remarkable contrast to some other hill tribes of India. Their features can rarely be called handsome, yet there is often a strong attraction in the frank and manly good humour of their broad Tartar faces, flat noses, thick lips and angular eyes. The children are sometimes very good looking, but beauty in women seldom rises beyond a buxom comeliness, and the open mouth discloses a den of horrors. The females have a full or preponderant share, in out-of-door labour of all sorts. It is a lively scene every morning, when numbers of men, women and children hie to the jungle to cut wood, or forage for a part of the household, almost as important here as in Ireland,-the pigs. Nothing is here of the phlegm or dull loquacity of the natives of the plains. All are full of life and spirits, whistling, singing, screaming, chasing one another, and in short, skylarking in all ways. They dislike early hours, and it is difficult to get them abroad betimes even on extraordinary occasions. They have great powers of industry, but are somewhat capricious in exerting it. Frank and independent in manner, and in spirit too, they have much more manifestly a conscience to distinguish between right and wrong, than any of their neighbours below. Whether they always act up to it is another question, but there were those among my Kasia servants, of whose right feeling, truthfulness, attachment, and strict uprightness according to their light, I shall ever have a pleasing remembrance. They are fond of money, and of trading, and are neither wanting in courage, nor given to quarrelling. They are apt scholars, and of late have shewn a considerable desire for instruction. The heads of a large village near Cherra invited my good friend, Mr. Jones, Missionary at the station, to reside with them, offering to build him a house, if he would do so. During a tour of part of the hills, in which I had the pleasure of accompanying him in 1842, the people listened to his discourse with decorum, and apparently with attention and interest.

The common food of the people in the vicinity of the plains is rice: in the interior rice, millet, maize, with kuchu, and some other roots and grains peculiar to themselves. Dried fish is a universal article of diet, and is brought from below in vast quantities. Those in the neighbourhood of the British settlement are by no means gross feeders. But I once saw labourers who were at work in the garden, carry off a dead leopard to feast on, with great glee; and in some of the northern villages, a species of caterpillar is eaten, and sold in the markets. They all enjoy flesh occasionally, especially pork ; there is always hot roast pork for sale in some corner of the bazar on market day. Some individuals and families have a superstitious objection to different kinds of food, and will not allow such to be brought into their houses. This has a remarkable parallel among a race of Negroes of South Eastern Africa, as the following passage (quoted in the Edinburgh Review for January 1837) from Captain Owen's Narrative, will shew. " It is prohibited in many families to eat certain animals' flesh, such as in some beef, in others elephants, others hippopotamus. It is said that if any family transgress this rule, and eat of the forbidden flesh their teeth will drop out," &c. From millet, they make large quantities of spirits, of which I am sorry to say there is a great consumption at all the bazars; and on the evening of Cherra market-day, one may see many riotous parties staggering to the verge of the valley, where in that state they descend the ladders before described, without fear or accident; for the people of the vallies are more addicted to drunkenness than those of the table land. This millet forms the principal grain cultivation in the vallies near Cherra Poonjee. In the end of the cold weather large tracts of the jungle are burnt, and the seed scattered on the stony slopes. The ground gives one or two crops, and then a new tract is prepared in like manner. Under this process the woods in the neighbourhood of Cherra are becoming rapidly thinned.

The Kasias are utterly unacquainted with any art of weaving, nearly all the usual articles of their dress, peculiar as they are, are made for them by other tribes bordering on the Assam valley. They manufacture a small quantity of caoutchouc, which they use principally for smearing baskets in which to keep honey, &c. By the way, the caoutchouc tree answers better than the Banyan to the well known description in Milton (or rather in his authority, Pliny) of the Indian fig. The former can much more reasonably lay claim, to leaves "broad as Amazonian targe" than any which

> "To Indian known In Malabar or Deccan spreads her arms."

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The honey is abundant and of unequalled flavour. A hollowed block of wood forms the hive.

As is the case with some European nations, the houses of the people are by no means so dirty as their persons. Generally they are dry, substantial thatched cottages, built of a double wall of broad planks placed vertically in the ground, and with a good boarded floor raised three feet or more from the earth. As they have rarely anything like a window, one sees nothing at first entering, and rarely escapes a bruised head from a collision with one of the massive low beams. The fire is always burning on an earthen hearth in the centre. There is no chimney, but one soon gets accustomed to wood smoke. On a swinging frame over the fire is piled the firewood to dry; the veranda, or space between the two walls, is partly stored with lumber, and partly affords shelter to the fowls, calves and pigs, which last are carefully tended, and attain enormous obesity. The people are unacquainted with the saw, and the large planks (in some of the chief houses more than two feet in breadth) of which their dwellings are built, are tediously and wastefully cut from the tree with an adge.

They use milk in no shape, and it is an article which a traveller making long marches in the country, must learn to do without. Nor are their cattle, whether goats or oxen, though numerous, applied to any useful purpose in their life time, being kept only for slaughter, and especially for sacrifice. Man is the only bearer of burdens. Their husbandry is confined to the hoe, and their grain is thrashed with the flail. All loads the people carry on the back, supported by a belt across the forehead, and in the rains they and their burdens are protected by umbrellas, in the shape of a large hooded shell of matting, which covers the head and the whole of the back. Dogs they are fond of, and always crop the ears and tail. Wild dogs hunting in packs, are commonly reported to exist in some of the vallies; and from the descriptions given me of wild oxen called "U-blé massi," or the cattle of God, existing in the neighbourhood of the Bara Pani, I have little doubt that the Gour will be found in those jungles. The worst feature in the manners of the people, and one likely to be a serious obstacle to the missionary, is the laxity of their marriages; indeed divorce is so frequent that their unions can hardly be honoured with the name of marriage. The husband does not take his bride to his own home, but enters her household, or visits

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it occasionally ; he seems merely entertained to continue the family to which his wife belongs. Separation is signified by the exchange of five cowries, and the children abide with the mother. There are, however, instances of more honourable and lasting unions. In consequence of this loose system, we find that generally there is little or no attachment between a grown-up son and his father, as probably the latter has long left his first family, and perhaps others in the interval ; whilst the affection between mother and son is very strong, and all the child's attachment rests with his mother's kin. A Kasia if asked after his father will often tell you that he is dead, meaning only that all connection between them has ceased. I remember once in walking with U-mung above mentioned, he exchanged salutations with a comely lass, younger than himself. On my asking, he said she was his ' Chota ma,' his father's present wife.

Immediately connected with this system, and we may suppose originating in it, is their strange (though not unique) law of succession. The son has no claim to succeed his father, whether it be in the chiefship or in private property. The sister's son has the inheritance. And the Raja's neglected offspring may be a common peasant or labourer, whilst he sees his cousin cherished, as the heir of his father's authority and wealth.

The greatest festivities of the people are funereal; either at the burning of the dead, or when a Khasia collects the ashes of his family, and erects a monument in their honor. On great occasions of this kind they hold a public dance for several successive days. The numerous performers are recompensed by an ample feast of pork and whisky. The dance is performed either with fans or swords. In the former, the men dance round and round a circle in the market place, or other open space, somewhat monotonously, attitudinizing and brandishing fans. They are all clad in the most brilliant finery that they possess, or can hire; richly embroidered outer shirts of broadcloth, silken turbans and dhoties, large bangles, heavy silver chains, and gold necklaces with plumes of down or peacock's feathers, and ornamental quivers. In the centre are the village maidens, they form in twos and threes, and set to one another with a comical pas of exceeding simplicity, which seems to be performed by raising the heels, and twisting from side to side, on the fore part of both feet, which never leave the ground. Their eyes are

demurely cast to the earth, or on their own finery, and never raised for a moment. They too are loaded with silver chains, tassels, and armlets, and all wear on the head a peculiar circlet of silver, having a tall spear head ornament rising behind. They are swaddled in a long petticoat, as tight as the clothing of a mummy, with an upper garment like a handkerchief passing tight under the right arm, and tied in a knot on the left shoulder. Waist they exhibit none, the figure being a perfect parallelogram. In the sword dance, the men accompanied by music and musquetry, dance and bound, clashing sword and shield, and uttering in chorus a chaunt, at first seemingly distant and sepulchral, but gradually becoming louder and louder, till it bursts into a tremendous unearthly howl; then sinking to a doleful chaunt, again and again rising to wake the echoes. The sword, a strange weapon, is composed of one piece of the coarsest iron, about four feet long, of which one third is handle, the rest blade. The latter has its edge slightly convex, and the back drawn to a peak like the old Turkish scymitar. The handle has two guards, and is grasped at the lower, the hilt passing between the two middle fingers. Yet with this uncouth weapon, so uncouthly held, I have seen a goat in sacrifice cleanly beheaded at a blow.

The village children have a curious gymnastic amusement. The trunk of a young tree, by a cut in the centre is fixed on a pivot at the top of a post about four feet high. Two urchins seizing opposite ends of the pole, run round in the same direction till they have got a proper impetus, and then whirl rapidly, in turn leaping and descending in a very light and graceful manner. The children also spin a regular pegtop, and it is *indigenous*, not an importation. Another of their recreations is an old acquaintance also, which we are surprised to meet with in the far East. A very tall thick bamboo is planted in the ground and well oiled. A silver ornament, or a few rupees, placed at the top, reward the successful climber.

But their favourite amusement in the cold weather is archery. In the trial of skill each village has from time immemorial its established competitor, and with this alone is the contest carried on. The Toxophilite meeting is held at each village on alternate market days. The target is pitched at about sixty yards. It is made of an oblong piece of bark, about three feet and a half high by one broad. Four or five

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persons generally shoot at once, they draw the arrow to the ear, and the attitudes are often very striking, though to say the truth, they are no Robin Hoods. The bow, the bowstring, the arrow, and the quiver are all made from various species of the all-useful bamboo. When all have shot, the arrows in the target are taken out, and the villagers crowd round the umpire as he distributes them. As each arrow is recognized, the party to which its owner belongs dance and leap about, fencing with their bows, spinning them high in air, and shouting together in a wild cadence. The villager whose arrows are in a minority pays a trifling forfeit of a few cowries.

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They shew no very particular courtesy of bearing towards their Rajas. Indeed the latter do not seem to have much power. They have the right of calling on all to bear arms, or send a contribution in case of war; what public revenue they have is derived from fines, and in some cases from trifling dues paid in kind by frequenters of the markets. The chief is the judge, and when he calls for the attendance of any party as criminal, defendant, or witness, he sends as a summons a piece of pork; the pig being probably charged in the loser's bill of costs. Fining is almost universal as a punishment. Occasionally however a man's whole goods are confiscated, whilst he and his family become the slaves of the Raja; and in some rare cases of murder, the criminal is given over to the friends of the slain, for them to wreak their vengeance. The water ordeal used to be a common mode of decision. The opponents with much ceremony plunged their heads under water on opposite sides of a consecrated pool, and he had the right who remained longest under water. I have been told that it was lawful to use the services of practised attornies in this mode of trial; so that long-winded lawyers have as decided a preference in these regions as they may have elsewhere. The last case of this ordeal, between parties belonging to Cherra Poonjee, occurred five or six years ago, and was fatal to both plaintiff and defendant.

The Kasias have a name for a Supreme, or at least for a chief god, but as usual they principally regard inferior spirits. These are supposed to reside on the tops of certain hills, or in rocky dells, and in groves on the high land, to which they are believed to descend at night. Temples and idols they have none, except in certain villages of Jaintia, where Kāli and her Brahmins have unfortunately effected a lodgment, probably under the patronage of the Ex-Raja, whose devotion to the bloody goddess cost him his kingdom.

The people are much addicted to consulting auspices of different kinds, but especially by the breaking of eggs. Indeed this latter superstition is so prominent, and has got such a fast hold of the people's minds, that it would seem to be the principal part of their religious practice. On all occasions of doubt it is resorted to, and they will spend whole days in dashing eggs upon a board, with much wild chaunting and wilder gestures, in search of a decisive or a favourable augury. They also constantly sacrifice goats, pigs and oxen to propitiate the spirits. A Kasia from a distant western village, at whose house I had once been a guest, having come on business to Cherra and paid me a visit, he was regaled with a glass of brandy; before drinking it, he dipped his finger four times in the glass, filliping a drop successively over each shoulder, and down by his right and left side; on being asked his meaning, he said it was "for the name of God."

A very curious superstition regards the boa, or some other large snake. It is believed, that, if he takes up his abode with any man, great wealth will accrue to the household; and that there are evil minded men who go about in search of whom they may slay, and cutting off the nose, lips, ears and hair of their victims, with these propitiate the serpent, and prevail on him to be their guest. And it is difficult to persuade a Kasia to go into the jungle alone, generally for fear of meeting with one of those villains, who are supposed to hide in all solitary spots looking out for prey. The way in which the serpent is believed to bring wealth to his votary, is after the manner of the prophet's blessing on the widow. Whatever he may sell from " basket or store, kail or potatoes," his stock diminishes not. One would hope to find his ill-gotten treasure turning to " slate stones," as wizard's gold was wont, but we hear nothing of this.

Their astronomical notions are the rudest of the rude. The changes of the moon are thus accounted for. The moon (who is male, and the sun female, as they were in England in Saxon times) every month falls in love with his wife's mother, and she repelling his addresses, throws ashes in his face. For the stars generally, in days of old there was a great tree; up this climbed a great multitude, and when they were fairly among the branches, another multitude came and hewed the tree.

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Wherefore (said the narrator) all the multitude remained above, where they form a great bazar, and are the stars we see. The group of the Pleiads is the only one they name, and it is called "the Henman." Is it not called "the chickens" in Italy? They have names for twelve months, as follows, but their application seems somewhat vague.

Naiwíen,	Ujiliú,
Ukla-lankót,	U-naitung,
Urampáng,	U-nailar,
Ulabér,	U-nailúr,
Uyaiyóng,	U-risau,
Ujamáng,	Nauprá,

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Smaller intervals are reckoned by village market days, which are held every fourth day, a greater and a less alternately. They have no weeks.

Some of the local traditions are interesting. The following is a parallel to the banquet of Atreus. One of the finest water falls near Cherra, in the deep valley of Maumlū, is called Kano Likai, or Likai's leap. The origin of the name was thus related to me. Once on a time a man of foreign race came to the hills, married a woman named Likai, and settled with his wife in a village north of Maumlū. They had two children, a boy and a girl. One day the woman betook herself to the forest as usual to cut fire-wood, in her absence the father killed his two little children, and cooked them; on his wife's return, he invited her to feast on what he had prepared, and she did so; he then disclosed what she had eaten. Then said Likai, "It is no longer good to remain in this world," and hurrying to the adjoining precipice leapt over.

Another rock in the same neighbourhood, has its name from a crime which occurred during a severe famine. Two brothers sat upon its verge conversing. One had just procured a supply of rice, the other was destitute. The latter thought within himself, "here is abundant food, my wife and children are perishing for want," and pushing his brother from his seat, seized his plunder, and hurried home.

On the road from Cherra to Jaintia is a singular ravine, some 600 yards in length, and 80 feet in depth, with sides remarkably even, and regularly parallel. The far end is closed by a round knoll. This, it is said, was the archery ground of three heroes of old, Ramha, Nonorrop, and Pangnorrop. I asked if there were giants then in old times? The good man answered, that he could not speak as to their height, but they were "Bara mota wala," exceeding stout.

The Kasias have also their maid of Arc, or black Agnes. She was the wife of Ula. Ula was a great warrior at the court of the Raja of Linkardyem, and the Raja married his sister.

Now in those days there were but twelve households in Cherra, and the Raja of Linkardyem, making war on the Raja of Cherra, drove him with his people to the woods, where they eat leather, and the rind of certain fruits. But the Raja of Linkardyem was a savage, and abused his wife, the sister of the brave Ula. For he placed her on a frame of bamboos, and lighted a fire beneath; and so, being roasted, she died. So Ula was wroth, and he went to the Raja of Cherra, and said, "Make me a great man, and I will avenge thee on thine enemy." So he of Cherra agreed ; and Ula having cut off the head of the Raja of Linkardyem, brought it to him of Cherra, and so became first counsellor of the Raja. One day as Ula was going forth on his avocations, with others of the village, he said to his wife "Clothe thyself with my arms, and garments." Meantime the new Rajah of Linkardyem came against Cherra with a mighty host of four thousand men. Now the village of Cherra was well girt with palisades and ditches, and the wife of Ula went forth to the barriers in her husband's arms and clothing, and the other women doing likewise went with her, and when the army of Linkardyem beheld the arms and the shield, they shouted in terror 'Ula ! Ula !' and turned their backs in flight; for great was their fear of Ula. And the wives of Cherra, and the men who remained, went forth with the wife of Ula, and chased the Linkardyemians, and smote them sorely.

From these twelve households come the twelve tribes which now exist in Cherra. My informant was of the house of Ula. I tell these tales as they were told.

About forty miles west of Cherra, not far from Laour in the Silhet district, a river debouches from the mountains, marked in Capt. Fisher's map as the Jadukotta river. It is a wide shallow stream in the plains, but from where you enter the hills in ascending, it is naturally dammed back so as to present for nearly ten miles a splendid river of the first class, with still, deep, and clear waters. Under one of the bold preci1844.7

pices which spring right from the water, to a height of many hundred feet, is a curiously arched cavity strongly resembling an upturned boat, and which the people name Basbanya's ship. Who Basbanya might have been, I could not learn, except that he was one of the "Deota Log." Resting under this vault, we witnessed the mode of fishing in the river. About thirty skiffs forming a circle dropped their large net, and each holding a cord from it, diverged in all directions. When they had reached the end of their tether, they again began to converge, smiting the water with their oars, beating with sticks on the gunnels, and howling like a hundred jackalls. Gradually they came on, making the hills ring, and hauling on their lines till they were formed round the net again. Then the result began to appear; as the net gradually contracted, the whole circle became alive with fish, and at least one boat was heavily laden with the spoil. The river must be inexhaustible in its supplies, for this operation is repeated many times a day by several similar companies, besides smaller parties. Passing on, we reached about 6 or 7 miles above the plains, the largest boulder I have ever seen, standing into, and overhanging the water. It bears the name of Raoul, and at a height of ten or twelve feet above the water level is an old and worn Persian inscription in large letters. I was then unacquainted with the Persian character, and the copy taken was rough and probably incorrect, for none of my acquaintance could decypher more than a word or two. It was lent to one of them for the purpose, and has never been returned. Perchance it was the record of some Mussulman adventurer, during the early days of their Indian history, seeking an El Dorado in these wildernesses.

On a little sandy beach where a tributary joined the main stream, were a few huts, the scene of a bustling bazar of exchange between the Bengallees and the Hill people. In the river's course above this all was impenetrable and uninhabited thicket. Far beyond, said the Kasias, dwell a strange race, who eat men and snakes :—an obscure rumour, probably of the Garrows, whose territory could not be far distant.

KURNAUL, September 4th, 1844. The following sketch of Cazvini's "Wonders of the Creation," consists of a number of notes thrown together for private reference, while looking over a MS. copy, in Persian and Arabic, of this curious compilation (illustrated with pictures,) in possession of the son of the late Nawab of Kurnool.

Being engaged in some researches with the mineral resources of S. India, my principal object was information as to sites, (hitherto unknown to Europeans,) of ores, gems or valuable minerals in India, and any thing that might afford the means of judging of the amount of produce anciently yielded by those extensive excavations, in its diamond, copper and lead districts, which are seen at the present day entirely neglected, and half choked by vegetation and rubbish.

Little, it must be confessed, on this head has been elicited from diving into the pages of the Ajaib-al-Mukhlukat. It mentions mines of tutiya, j blue vitriol, on the coast of Hindustan; but the precise site is not specified : I am not aware of the existence of any such mines at the present day in India. It is exported from Pegu, and used by Hindus as an escharotic loadstone, al-maknátis, القناطيس colour red, with black lines, he states to be brought from India. It has the property, he adds, of attracting iron, hence vessels that sail to the land of the loadstone, are built without iron nails.

I have found large masses of magnetic iron ore with polarity in the neighbourhood of Hospeti, Kittovo, and the Baba Booden mountains, with dark red and black stripes, as described; and have little doubt that it exists largely in the highly ferriferous granites and hypogene rocks of S. India. The idea of the rocks on the coast of India attracting vessels by magnetic forces, may have arisen from the observation of the effects of the powerful surf in washing vessels ashore; and that of the vessels without nails, from the Massula boats, which are constructed of planks sewn together with coir. Diamonds, lead, copper, and iron are not mentioned as exports from India. The best sword blades are stated to be brought thence.

Diamonds are said, as well as rubies, to be found at the foot of *Gebel* Serendib, in Ceylon.

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That Ceylon produces rubies is a well known fact, but I am not aware that the diamond has ever been found there, or that there is any geological formation on the island equivalant to the diamond conglomerate of India, or the Cascalhao of Brazil. If obtained from Ceylon in the time of Cazvini, it was probably imported from India by the Singhalese from gem merchants.

Among other productions of India are enumerated the bezoar stone, (padzahr, پادزیر or expeller of poison,) from the stomachs of sheep. Eagle stones, (haja-al-akab جبرالعقاب found in eagle's nests. The author states them to be like tamarinds, and to give a sound when shaken; but when broken, are found empty. The eagles bring them from India.

The astronomical part of the work is evidently compiled from the Arabian authors, whose systems were founded on those of Hipparchus and Ptolemy; and the compiler has fallen into the error of the latter in stating the precession of the equinoxes to be as 1° per century, instead of following the Arab prince Allategnius, who brought it as near the truth as 1° per 66 years.

His natural history is chiefly derived from the works of Aristotle, Dioscorides, Sheikh ur Reio; and his geography from Ptolemy and Abur Rihan.

In these departments more especially, the author has gravely enumerated many travellers' tales and incredible absurdities; but we should be sorry to reject the whole on account of defects, from which even the works of the great father of history, Herodotus himself, are by no means free.

The experience of after-times often demonstrates the truth of statements entirely disbelieved, and ridiculed on their first promulgation. Witness those of the slandered and magnanimous Bruce. Even in the most marvellous traditions of the various races of the earth, we frequently find clues to valuable truths.

The wonderful tales of griffins, hippogriffs, dragons, and other monsters of old, probably originated in ancient traditions of strange animals now extinct, the fossilized dishonored skeletons of which, in the present day, convince us of the fact, which we should have otherwise ridiculed; namely, that the world once swarmed with such monsters. One of the last descriptions in the *Ajaib-al-Mukhlukat*, is, that of a strange creature seen on the coast of Arabia Felix, (Yemen,) the legs and lower parts of which were those of a woman, but separating from the hip into two distinct human bodies, with two ne ds and two pair of arms. These two bodies lived, ate, and drank amicably together, but sometimes they quarrelled. After a space, one of the bodies died, and the traveller who relates the story, states, he was informed that after the lifeless trunk had been cut off, the other trunk survived and went its way.

The sequel of this story is a little marvellous; and the whole tale would have been thought excessively Munchausenish by any person who had not seen or read authenticated accounts of the Siamese twins.

The mermaid I have little doubt has its origin in the exaggerated accounts of the form and habits of that singular inhabitant of the Malayan seas, the Dugong; Gog and Magog, and a host of other strange beings described by Cazvini, had their origin in the exaggerated accounts of travellers. Anticipating some scepticism on the part of his readers, Cazvini gravely premonishes them that all things are possible to God.

In describing the wonders of the creation, like the writers of the Bridgewater Treatises, he piously calls attention to the wisdom and beneficence of God in the displayed harmonious design of his works; and labours to impress on his readers, that the heavens and their starry host; the earth and encompassing ocean; and all that therein is, men, angels, genii and animals, were created by God for the manifestation of his glory and greatness.

The work was evidently intended as a popular exposition of the sciences and natural history, rather than as a class book for students in the many branches on which it touches.

The geological theories of mutual and periodical changes of sea and land; the poles; the successive destruction and reproduction of different races of animals; the entombment of organic remains; the degradation of mountains by watery action; the transport of their debris into the ocean again to become mountains when its bed becomes dry land; the origin of tides; springs; earthquakes; halos, &c. are curious and worthy of perusal. Notice of the Ajaib-al-Mukhlukat. 635

Cazvini wrote in the 13th century. His work is divided into two mukálehs, or discourses. The first treats of sublime or heavenly things, (Alwiat and contains thirteen nazrs, sub-divided into chapters. The first eight nazrs describe the arrangement of the heavens, the sun, moon, their eclipses, &c.; the planets, their movements and periods of revolution; their retrograding and becoming stationary.

The ninth near comprises an account of the fixed stars, constellations, &c. The tenth narr treats of the zodiacal signs; and the eleventh of the empyrean heavens, the primum mobile—Falek-i-Afla'k $i \in J$ in the twelfth narr, we find a description of the lunar mansions; the north and south poles; the zodiacal signs; angels; genii and devils, &c.; and in the thirteenth, one of the divisions of time among different nations; the four seasons, &c.

The second mukáleh treats of lower, or sublunary things, (Siffliát, سفلمان) and is divided into five nazrs, subdivided into chapters.

They treat of the elements; falling stars; air; clouds; rain; the winds; halos, $(halah, J_{z})$ thunder and lightning; water comprising the ocean; its ebb and flow; the seven seas; the earth and its divisions; earthquakes; mountains; plains; streams; springs and wells; things compounded of the elements such as minerals; meteoric stones, vegetables, animals, man, angels, genii, ghouls, devils, beasts, birds, and reptiles; concluding with an account of strange animals.

Summary of the First Mukáleh.

I shall now proceed to a summary of the contents of the 1st mukáleh, scattering a few remarks here and there, as they occurred to me during perusal.

The universe is considered to be an assemblage of spheres or orbits, (Aflak, افلاک) concentrically arranged "like the coats of an onion," Hamchun Kasher-i-piyaz), and similarly contiguous.

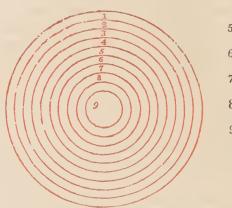
The author gives an illustrative diagram of the mundane system, of which the subjoined is an exact copy. The concentric red lines are to represent the orbits in which the sun, planets and fixed stars are supposed to revolve round the earth.

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The Empyreal Heavens.

- 1 Zodiac.
- 2 Saturn.
- 3 Jupiter.
- 4 Mars.



5 The Sun.
 6 Venus.
 7 Mercury.
 8 The Moon.
 9 The Earth.

The earth is supposed to constitute the motionless nucleus, (the *centrum mundi* of the Aristotelians,) around which the sun, moon, and planets revolve in the following order of proximity :---

The Moon,	• •	• •	• •	Al-kamr. القمر
Mercury,		••	••	Uttarid.
Venus,	••		. •	Tohrah. وهره
The Sun,	••	• •		Shems.
Mars,	• •	• •	• •	Marrikh.
Jupiter,		••	••	n · Muchtani
Saturn,	••		••	Tuhal. زُحْل

Inclusive of all is the orbit of orbits, the *Falek-i-Afla'k*, in which the fixed stars are set as jewels in a ring, and revolve eternally with it from East to West.*

The author, after slightly noticing the proper motions of the planets, or "wandering stars" and fixed stars, proceeds to give a description of the moon, and of its diurnal and monthly revolutions round the earth.

* This is the theory of Aratus, Hipparchus, and after them of Ptolemy; it conveys the impression of a belief in the solidity of the spheres. 1844.]

He represents the moon as being the least of all the luminaries of heaven, and its orbit as being nearest to the earth; its substance, naturally dark, receiving light from the sun, (an opinion, according to Plato, anterior to Anaxagoras 500 years before Christ,) in regularly varying phases, according to its distance or proximity. From performing its revolution from West to East round the sun in a shorter time than any other planet, it has been called the Paik-i-falek, whe courier of the sphere, who performs his course in 28 days' journies, or manziles, On the 29th the moon is veiled (mustater,) being below the sun's light, or in conjunction : this sometimes occurs on the 28th, when the month is said to be nakis, زاقص deficient. From this time it begins to increase its distance from the sun, and daily to receive more of its light. When it arrives in opposition, the whole of the moon's face nearest the earth becomes illumined, and is termed badr, in contradistinction to halal, هلال new moon. As it approaches the sun, it receives less of its light. At the conjunction (mukáran, (1)) of the sun and moon, the dark side is turned towards the earth, and the light side towards Mercury.

Eclipses of the Moon.

The author explains these phenomena by the supposition of the earth's coming between the sun and the full moon, when near its ascending or descending node; when the earth's shadow is consequently thrown on the moon.

Moon's influence on Tides.

The bi-diurnal ebb and flow of the ocean are ascribed to the moon's revolution round the earth. The flow is at its maximum when the moon arrives opposite the axis of the earth, (*i. e.* when it comes upon the meridian,) and begins to ebb immediately it has passed this point. The ebb is at its maximum when the moon is in the horizon.

The bi-monthly rises and falls of the ocean (spring and neap tides,) are said to be owing to the conjunctions and opposition of the sun and moon.

Moon's influence on Animals and Vegetation.

During the moon's increase, animals are supposed to be stronger; the temperament of man, the secretion of juices more active; beasts more eager in pursuit of prey; fishes in better condition; growth of vegetation quicker, and the production of fruit in greater abundance and of superior flavour and colour; gems are generated, grow, and acquire brilliance during the days of the moon's increase. A person who falls sick during the increase, will have greater strength to resist the progress of his disorder than during the wane of the moon.

When much exposed to its rays he then becomes sleepy and indolent, and subject to colds, vertigos, &c. The flesh of animals falls into rapid decomposition.

The Milky-way, Surj-al-Asma, سراج الأسام the Saddle of the Heavens. The milky way is called by some, the Mother of Stars, from the countless myriads it contains.*

Here follows a brief description of the computed size and revolutions of the planets, sun, and solar eclipses.

Fixed Stars.

The fixed stars, the author states, are innumerable; 1022 have been described, (the number given by Ptolemy, besides the stars Adeneba, Algardi, and Almuren, though Hipparchus gives a catalogue of 1081,) 970 of this number are grouped into 48 figures or constellations, 20 of which are in the Northern hemisphere; 16 in the Southern; and 12 in the Zodiac. (In the Gatasterismi of Eratosthenes, 250 years B. C. are the names of 44 constellations.)

The fixed stars move from W. to E., advancing about one degree per century, and performing their revolution like the sun, in 36,000 years. The axis of their orbit is similar to that of the Zodiac. The Zodiac is divided into 12 signs, (the names of which, like those of the Hindoos, correspond with those of the Greeks,) viz.

الحمل	Al Hamal,	• •	Κοιος
الثور	Ath Thour,	••	Τλυρος
الثوامين	At Tawámin,		Διδυμος
الثرطان	As Sartan,	••	Καρκινος
الأسد	Al Assad,	• •	Λεων

* Democritius was the first to propound what the telescope of Galileo has proved; viz. that the galaxy was a congeries of minute stars. Up to his time it was thought by some that this singular track on the heavens was a forsaken path of the sun, a fiery exhalation or zone, the earth's shadow, &c.

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اغدرا	Azra,	••	Παρθενος
الميزان	Al Mizan,	••	Ζυγος
العقرب	Al Akrab,	••	Σκορπιος
دوالقوس	Zu-al-kous,		Τοξοτης
الجدى	Al Zadi,	••	Αιγοκερως
مساقب الما	Musakib-al-ma,	••	Υδροχοος
المكيس	Al Makin,	••	Ιχθυς

The sun is supposed to traverse the 12 signs of the Zodiac in 365 days.

After the description of the constellations and their principal stars, follows a notice of the *Falek-i-Buruj* and the *Falek-al-Aflák*.

Angels, Geniis and Devils.

The author supposes angels to be beings endowed with life, reason and wisdom; geniis free from darkness, lusts, sin, and impurity, among whom exists not the distinction of sex, beings created from fire expressly for the praise and glorification of the Almighty; of various forms and power, whose sole delight is in divine adoration; and whom God made to tenant the skies, in order that his power and goodness might be everywhere manifest; in the heavens as well as on earth, in the regions of air, and among the depths of the sea.

Genii and devils are supposed to be allied to the angels, but imperfect, (vide p. 665.)

Of the angels that minister to the Almighty, four are constantly employed in interceding for mankind and created beings: the first has the form of a man; the second that of a bull; the third, that of a lion; and the fourth that of an eagle.

Another angel presides over the motions of the spheres and stars; the elements; the animal, vegetable, and mineral world; and over all things below the moon's orbit. His strength, excellence, and size are incomparable, and he possesses power to arrest and stop the revolution of the universe.

Among the principal angels, the author enumerates 1st, *Israfil*, who will sound the trump at the great day of resurrection, and whose wings reach from East to West, from heaven to earth. 2nd, *Gabriel*, the

spirit of the faithful the holy spirit, روح القدس who has charge of all created things. 3rd, *Michael*, who has charge of heavenly bodies, the actions and powers of things that have breath, and the angel-tenanted sea of the 7th paradise. 4th, *Izrail*, the angel of death, the place of repose of action; the place of immersion of souls and bodies, whose feet are on earth, and whose head touches the firmament.

The author, after narrating conversations between the prophets Abraham and Solomon with the angel of death, proceeds to describe the seven angels that have separate charge of the angels, the seventh heavens, the guardian angels, two of whom are constantly on the right and left of every mortal, to record his good and evil actions,* the two angels *Harut* and *Marut*, imprisoned till the day of judgment by the Almighty in a well in Babylon, for having, when subjected under a fleshly form to similar temptations, committed sins for which the angels denounced mankind.

Division of Time.

The measurement of time hinges upon the revolution of the heavenly bodies. Time is divided into *karans*, قرن or cycles; *karans* into years; years into months; months into days and nights; days and nights into hours; hours into minutes; and minutes into seconds.

Human life is made up of time; a space to be passed by each traveller; of which every year is a journey; every month a *barid*; every week a *parasang*; every day a mile.

The day is shortest when the sun enters in *Jadi*, (Capricorn), and longest when it appears in *Sartan*. (Cancer). When the sun enters *Hamal* and *Mizan*, (Aries and Libra,) at the time of the vernal and autumnal *equinoxes*, the days and nights are equal.

The day is the space between sunrise and sunset; and the night between sunset and sunrise.

* "We created man, and we know what his soul whispereth within him: and we are nearer unto him than his jugular vein. When the two angels deputed to take account of a man's behaviour, take account thereof; one sitting on the right hand, and the other on the left, he uttereth not a word; but there is with him a watcher ready to note it. And the agony of death, shall come in truth. Thus oh man is what thou soughtest to avoid. And the trumpet shall sound: this will be the day which hath been threatened, and every soul shall come."—Sale's Koran, p. 382.

The Week.

The month is divided into four portions, consisting each of seven days. Sunday, (Yum-al-ahadi, يوم الاحدي) is the first day of the week. It is kept holy by the Nazarenes. Jesus, blessings upon Him, first commanded his followers to keep holy the Friday; but the latter being unwilling that their holyday should precede that of the Jews; viz Saturday, Sunday was fixed on.

The second day is Monday, Yum-al-ithnin, يوم الاتنجى the day of the flight to Medina.

The third, Tuesday, Yum-ath-thaltha, يوم الثلثا is the day on which Cain murdered Abel.

The fourth, Wednesday, Yum-al-arba, seguliter,

The fifth, Thursday, Yum-al-khamis,

Friday, the Mahomedan sabbath, the day of assembly, يوم ألجمع Yum-al-juma, the author has placed first in his list, though it is evident Sunday was originally, among the Arabs, the first day in the week, and Saturday, (As-sabt, السبب) the seventh, or sabbath of the Jews), the last.*

^{*} It may be remarked, that the author assigns no reason for the division of the month into weeks. A division of time, not dependent on any movement or epoch of the heavenly bodies, but evidently of divine origin, the earliest and most authentic account of which is found in the books of Genesis and Exodus, wherein Moses declares that the creation of the world was accomplished in 6 days, and that the Almighty rested on the 7th day, and blessed it, and commanded that it should be kept holy as a day of rest by mankind; a circumstance to which the Mahomedan author briefly adverts, without explaining why Mussulman do not adhere to this precept of the Pentateuch.

mence with the day of the sun; and the order of succession of the names is precisely similar; a coincidence, striking and remarkable.

The natural binary division of the month into the light and dark periods, or rather of the moon's wane and increase of 15 days each, the *kista* and *suklu pukshums* of the Hindoos, is not mentioned by the author.

I have asked many Brahmans versed in astronomy, and well acquainted with the principles on which their sages have founded their divisions of time, why the week alone should not have been based on the movements or conjunctions of any of the celestial bodies. They have been generally, what is nautically termed, taken aback at the question, but said, their attention had not been called to it before. After consulting their books, they acknowledged that the week coincides with no revolution or conjunction of the stars or planets, and that it is of divine origin, instituted by the Supreme Being in everlasting commemoration of the days on which he successively created the sun, moon and five planets.

This may be regarded as an indication that Sabianism, from the Arabic As-Saba, السبع the seven, prevailed among the Hindoos prior to the introduction of Brahmanism and Buddhism.

Months.

After briefly noticing the months of the Turks, Copts, Zenjs and Hindoos, the author details those of the Arabs, Rumis and Persians.

Those of the Arabs consist of 30 and 29 days alternately, and their year of 12 lunations, or 354 days.

Arab Months.

Names.			Days.	Names.			Ι	Days.
					Brough	nt over,	• •	177
Mohurrum,	••	••	30	Rajab,	••	• •	• •	30
Suffer,	• •	• •	29	Sraban,	• •	• •		29
Rubai-al-awal,	••	••	30	Ramzan,		••	• •	30
Rubai-us-sani,	••		29	Shawal,	••	••	• •	29
Jamadi-al-awal,			30	Za'l-kadr,	• •	••		30
Jamádi-us-sani,	••	••	29	Zu'l-hadj,	••	••	• •	29

Carried over, 177

Total, .. 354

		Da	ys.		Broug	ht over,	Days. 182
Tisrin	I.		31	Nisan,	••	••	30
,,,	Π.		30	Ayar,	• •	••	31
Kanun,	I.		31	Hanzan,	•••	••	30
,,	II.		31	Pamuz,		••	31
Sevat,	••	• •	28	Ab,	••		31
Azar,	••	••	31	Elul,	••	••	30
		Carried over,	182			Total,	365

Rumi Months.*

Persian Months.

The Persian months consist of 30 days each, giving to the year 360 days; but 5 days are annually added to the month *Aban*, which nearly completes the solar year. The month of Fernurdin commences the Persian year about the time of the autumnal equinox.

Names and order of the Persian months :--

1.	Fernurdin.	7.	Mahar.
2.	Ardibihist.	8.	Aban.
3.	Khurdad.	9.	Azur.
4.	Tir.	10.	Di.
5.	Murdad.	11.	Bahman.
6.	Shahryur.	12.	Isfandarmas.

Besides the division of the month into weeks, like other Mahomedan countries, the Persians have a separate name for each of the 30 days composing the month.

The author enters into a description of the months and of remarkable feast days among the Mahomedans and Persians.

^{*} The names of the Rumi months are identical with those of the Syrians, who as well as the Greeks, adopted the era of Seleucus Nicator, dating 311 years and four months before Christ. The Syrian Greeks began their year in the month Elul, or September, and other Syrians in Pishrin 1, or October: the Jews about the autumnal equinox. The Hindee solar months commence in September with Aswini.

The four Seasons.

The period of the vernal and autumnal equinoxes, and those of the sun's entrance into *hamal* and *sartan*, (Aries and Cancer,) divide the year into four parts.

The first called (*rubbi*, ربيح) or spring, extends from the vernal equinox until the sun has completed its northerly course, and is on the point of returning towards the equator. The summer, (*saif*, (*aui*,), commences at this period, and lasts till the autumnal equinox, when autumn begins, and continues till the sun has attained its utmost southerly declination. The winter, (*shita*, (*mix*)) now sets in, and terminates at the vernal equinox.

The Cycles of the Prophets.

Some *ulimas* have declared, that God, once in a thousand years, in order to manifest his divine power and glory, has sent a prophet among mankind.

In the first 1000 years appeared *Abu'l-basher*, (the father of mankind,) Adam. In the 2nd, *Abuna-noh*, Noah, the Shaikh of the prophets; and Abraham, the beloved of God, *Khalil Allah*, in the third. In the 4th millennium appeared Moses, who spoke with God, *Kalm Allah*. In the 5th, Solomon, the son of David. In the 6th *Isa*, Jesus, the Spirit of God, *Ruh Allah*; and in the 7th, Mahomed, the Seal, or last of the prophets.

To this succeeds a curious story of the prophet Khizrs appearing to a king, and telling him of the changes the world had undergone. That the sea was formerly dry land, and dry land sea, and that races of strange animals, no longer existing, have been swept from the earth's surface in succession.

2d Mukáleh, or Discourse on Sublunary Things.

Al Makalieh ath thanieh fias sifliat, المقالند الثانيد في السفليات The elements, Al anúsir, العناصر

The elements are supposed to be four in number; viz. fire, air, water and earth, (then thought to be simple bodies,) of which every thing else is composed.

Fire.

The nature of fire is heat: its proper place in the creation is below the moon's orbit, above the region of air: fire being the lightest of the elements.

Air and Water.

Air being lighter than water, and heavier than fire, occupies the intermediate space.

Earth.

Earth being the heaviest of the elements, lies lowest near the lines of contact; each element is thought to partake of the character of the element to which it approaches. Fire is blended with the air as in the *simoom*. Air becomes water, as in rain. Water is converted into air, as in vapour; and water into earth as in petrifying springs.

Phenomena of the region of Fire and Air, Meteors and Falling Stars.

Meteors and falling stars are considered as exhalations that have risen from the earth, and become ignited on reaching the region of fire; as the smoke of a recently extinguished lamp is ignited, on reaching the flame of another lamp placed above it.*

Division of the Atmosphere.

The air is divided into three regions. The highest nearest the region of fire, is extremely hot, and is called ether, (ather,)

The second is intensely cold : the third, which is nearest the earth, has a more moderate temperature, and is subdivided into warm, cold, and temperate.

Clouds and Rain, (Sahab-wa-al-matr, المطر المطر)

Clouds are supposed to be water raised in vapour by the sun's heat; and rain and mist, the result of their condensation in the middle, or cold region of air.

* It is curious that the uses of oil gas should have remained so long latent, after this early discovery of its inflammable nature.

The Winds, (Ar Riah, الرياح)

The winds are produced by the sun, and the revolution of the spheres. The North wind is cold, because it comes from the North pole; and the South wind is warm, because it passes over the equator.

Thunder and Lightning, (Arradwa-al-bark, (11, 20, 11)

From the jagged and broken appearance of clouds in a thunder storm, it is thought that thunder and lightning are the result of the shock of the collision by which the clouds are thus broken in their rapid descent after condension in the middle region of air.

The lightning is seen before the thunder is heard, although it is said that both are simultaneous. The reason of this is, that the sound of the thunder is dependent on the undulations of the air, (mowkuf bar, tamawuj,al-haw-a, موقوف بر تموج الهوا) which are slower than sight.

When a person is beating clothes on a stone at a distance, we see the cloth strike against the stone before we hear the noise.*

Halos, (Al-halah, الريازي hence our term halo,) are caused by the reflection of the moon's light on subtle polished particles floating in the air, and veiling the moon.[†]

Rainbows, (Kous, قوس)

Rainbows occur when transparent particles of water are in the air opposite the sun, the rays of which cause them.

Phenomena of the region of Water, (Karah-al-ma, S) Convexity of the surface of the Sea.

The surface of the ocean is assumed to be convex, because sailors affirm, that in approaching a mountain from the sea, the top of the

^{*} Anaximander, more than five centuries before Christ, ascribed the phenomena of thunder and lightning to a similar cause; and his pupil, Anaximenes we find, in an approach to the discovery of electricity, comparing lightning to the flash produced, in seas of warm latitudes, by the stroke of an oar.

⁺ Halos have been lately considered as caused by the moon's light, or frozen shining particles floating in the air; while others suppose them occasioned by that class of cloud called by meteorologists, *cirro-stratus*, which are formed in the lower strata of the atmosphere.

Notice of the Ajaib-al-Mukhlukat. 617

mountain is first descried, and drawing nearer its centre and base, come into view successively.

Saltness of the Sea.

Water is divided into two great classes; viz. salt and fresh, the salt is derived from the earth burnt by the sun, and driven by the winds into the sea. Salt prevents the ocean from putrefaction, and creating a pestilence in the world, which the ocean surrounds.

Subdivisions of the Salt Water.

The salt water is divided into seven seas, comprehended in the surrounding ocean, Bahr-i-Mohit; viz.

The sea	of China, ••	Bahr i	Chin,	••	بحرچين
,,	Hind,	,, al	Hind,	••	: حرالهند
,,	Persia,	,, al	Pars,	••	بحراليارس
, 5	Kolzum, or Red Sea,	,, al	Kolzum,		بحرالقلزم
33	Zenj, or Zan-	,, al	Zenj,	••	بحرالزنج
33	Mughrib, or Western sea, }	,, al	Mughrib,		بحوالمغرب
		,, al	Kharz,	•••	بحرخرزر

Seven other names are given to the seven seas ; viz.

1. Bahr-i,	••	••	Kabis.
2. "	••		Hom.
3. "	••	••	Muzlin.
4. "	••	••	Mirjos.
5. ,,	••	••	Sakin.
6. ,,	••		Baki.
7. "	••	••	Nitash.

The author having entered into a long description of the wonderful inhabitants and natural productions of these seas and their different islands, of which are given some curious paintings, proceeds to describe the form and divisions of the earth.

The Earth, (Kurah-al-arz, كرة الأرض)

The earth is supposed to be divided into three parts; there is nothing. lower than the earth. Some say, it is striped like a sphere; others

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like a shield or half a sphere. Most of the ancients are of opinion, that it is a ball placed in the midst of the heavens, like the yolk of an egg in the white. Some say the earth has nine sides : on each side men stand with their feet to the earth, and their heads towards the sky. Some say, it floats in the midst of the ocean.

Pythagoras (نويتاغو, س) thinks the earth revolves, and that the apparent motion of the heavenly bodies, from East to West, is caused by the motion of the earth from West to East. But this can never be; for if we liberate a pigeon in the air, it could never again return to us; since the earth must revolve more rapidly than a pigeon can fly.*

The earth is divided into three parts; viz. 1st, the part above the ocean; 2nd, the part concealed by the ocean; and 3rd, its centre or axis. The surface is covered by vegetation and animals; the interior is occupied by ores, metals, &c. Only half of the heavens are visible at once ; but, if we move our position, on the earth's surface, we see parts of the heavens which were not visible from the place which we first occupied. at the rate of one degree of the heaven's surface for every 19 parasangs we travel.⁺

After a quotation from Abu Bihan's speculations on the earth's diameter and circumference, the author alludes to the fact of the Caliph Mamun causing the measurement of a degree to be made, (this was done, A. D. 814, in the sandy plains of Mesopotamia, between Palmyra and the Euphrates,) by which $56\frac{2}{3}$ miles were fixed as the equivalent of a degree of the heaven's circumference.

Batolimus, (Ptolemy), he goes on to state, divided the night and day into 24 equal portions by the rising and setting of the sun. Having ascertained that the sun traverses 15° of its path in an hour of time, $(24 \times 15^{\circ} = 360^{\circ})$, he found, by observations of an eclipse of the sun at two cities, (the distance between which was ascertained,) that a degree of the sun's path was equivalent to every 75 Arabian miles of the earth's surface, which being multiplied by 360 give 27,000 miles as the measure of the earth's circumference, (24,912 geographical miles are its true circumference.)

+ Calculating the parasang at 3 miles, the terrestrial degree would be 57 miles.

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^{*} This is the old objection of the Ptolemais to the Pythagorean or Copernican system; they forgot that the atmosphere, in which their pigeon flies, partakes of the motion of the earth, and carries the pigeon along with it, at an equal rate with the objects on the earth's surface.

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The author observes, that when the sun rises on the Islands of Prosperity, (Jaadit) $\mu a \kappa a \rho \omega \nu$, or Fortunate Islands of Plotemy, in the far west, he is rising on the inhabitants of China in the extreme East. Hence the distance, he states, must be one-half of the earth's circumference, or 13,500 miles.*

The Divisions of the Globe.

Abu-r-rihan of Kharezm, divides the globe into the Northern and Southern hemispheres, which are separated by the equator.

Another line, crossing the equator at right angles, and extending from pole to pole, subdivides it into four quarters.

The Southern quarters are supposed to be occupied by water; and the equator to be the austral limit of the habitable world.

Of the Northern hemisphere $\frac{1}{4}$ th is land, and the remainder water. The tracts near the North pole are uninhabited from the intense cold which is occasioned by its distance from the equator.

Those parts are inhabited, where the maximum length of the days and nights never exceed 16 hours.

The South-easterly parts of the North hemisphere are inhabited by the Abyssinians, the Zenjs, (people of Zanguebar,) and the Nubians. The S. W. tracts are bad, God knows.

The seven Climes, (Haft Akalim, إيفن اقاليم) the Khiµaza of the Greeks.

^{\sim} The habitable portion of the earth, (*i. e.* Northern hemisphere,) is divided into seven climes, which are supposed to extend like zones, or carpets, spread from East to West, between the equator and the North pole. Their breadth from N. to S. varies, and their length shortens,

* Eratosthenes of Cyrene, who determined the distance between the tropics, 47° 24' 39", or $\frac{11}{63}$ of the earth's circumference, was the first to attempt the earth's measurement by observations of the sun's meridian height. He found that, at the summer solstice, the sun was vertical at noon at Syene, while at Alexandria, at the same time, it was the 50th part of a circumference from being vertical; hence he concluded, neglecting the solar parallax, that the distance between these two cities comprehended a 50th part of the globe's circumference. The distance between Alexandria and Syene was then estimated at 5,000 stadia; which multiplied by 50, give 2,50,000 stadia as the measure of the circumference, and divided by 360, $694\frac{4}{9}$ stadia to a degree.

This practical philosopher, who flourished nearly three centuries before Christ, wrote a work on geography, which is unfortunately lost. Notice of the Ajaib-al-Mukhlukat.

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conformably to the earth's form, as they approach the pole. The length of the 1st clime, that nearest the equator, is $3,000 \ parasangs$, and its breadth 150; while the length of that nearest the pole is only 1,500, and its breadth, 75 parasangs.

Afridun, Alexander, Ardeshir, and other similar monarchs, have made these climes the boundaries of their empires.

The leading principles on which this division of the North hemisphere into climates is based, are the differences of temperature, and the maximum length of the days and nights. In the first clime, the maximum length is from $12\frac{1}{4}$ to $12\frac{1}{2}$ hours.

					Hours.	Hours.
In th	e 2nd Clime from	••	••	• •	$13\frac{1}{4}$ t	$13\frac{1}{2}$
,,	3rd Ditto ditto,		••	• •	$13\frac{3}{4}$ t	o 14
,,	4th Ditto ditto,	••	• •	• •	$14\frac{1}{4}$ t	$14\frac{1}{2}$
,,,	5th Ditto ditto,	• •	• •	• •	$14\frac{3}{4}$ t	to 15
,,	6th Ditto ditto,	• •	••	••	$15\frac{1}{4}$ t	$15\frac{1}{2}$
2.5	7th Ditto ditto,			• •	$15\frac{3}{4}$ t	io 16

It extends to $16\frac{1}{2}$ hours, beyond which all is supposed to be desolate and uninhabitable.

Earthquakes, (Fiaz Zulazal, في الزلازل)

When vapour and steam are pent up in large volumes in the bowels of the earth, and are not condensed by cold into water, nor dissipated by heat; if the surface of the earth becomes heated, and they cannot find vent, they cause the earth to tremble like the body of one affected with fever, which shakes from the greenness of the corruption that is within.

In the human body, however, there is a natural heat which becomes inflamed, and dissipates or dissolves the noxious matter; but in the earth, this species of heat does not exist.

These vapours sometimes burst through the surface of the earth, or undermine it, which causes the enguling of mountains and cities.*

* It has long been remarked, that among other signs of an approaching earthquake, volcanos in the vicinity ceased to smoke. Anaxagoras (500 years B. C.) supposed earthquakes to be caused by the pent-up air or vapour endeavouring to escape.

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Formation of Mountains and Sand Dunes.

Mountains were originally formed of water and earth, hardened by the heat of the sun into rock, like clay into brick. The earth was drifted into heaps by the wind, and thus converted into stone.

Every 36,000 years the stars complete a revolution,* and a great change takes place on the face of the globe. The North becomes South, dry land becomes sea; and sea, dry land; mountains, plains; and plains, mountains.

Mountains crumble by the solar heat into dust and sand, which are carried by the winds into rivers, and by the rivers transported into the bed of the ocean, and in lapse of time become piled up into hills; in which, when the bed of the sea again becomes dry land, we see bones and shells.

The reason of some rocks being piled up in layers, is, that they have thus been deposited successively by water. Running water is continually transporting the earth of mountains and plains into lakes and seas, in which it is accumulated in heaps, which become mountains.

When left dry by the sea, their surface is first covered with grass, and shortly becomes inhabited by animals.

Sometimes the water of the sea rises, and covers what was formerly dry land.[†]

The use of Mountains, (Fi-fuaid-al-jebal, فيفوايدالجبال)

Mountains were created as the foundations of the earth, that it should not be moved; they serve as barriers to the land against the sea, and as repositories of minerals. The streams and springs which run down

* On the theory of their advancing a degree East every century, they would complete a great circle of 360° from W. to E. in 360 centuries. Ptolemy makes the precession at 36" per annum. Hipparchus, according to Le Gentil, 50".

† Geologists of the present day have hardly advanced further in their theories of the formation of aqueous rocks, and the entombment of organic remains.

The Arabian author, however, cannot lay any fair claim to originality, as these ideas are as old as Pythagoras, or at least the edition of them given by Ovid. The theory of the periodical catastrophe in which the world is supposed to be involved had its rise, probably, with the Cosmogonists of Egypt, who believed that the world is successively destroyed and re-produced at the return of each great year, "when the sun, moon and planets are in the same sign of the Zodiac, from which they commenced their course." The length of the great year of the world, according to Orpheus, is 120,000 common years, according to Cassander 360,000, vide Note, page 20.

Notice of the Ajaib-al-Mukhlukat. [No. 152.

their sides, sustain animal and vegetable life; their water is raised again by evaporation into clouds, which recondensing in rain and snow on the mountain tops, is collected in holes and caverns, and affords a constant supply; such is the origin of springs. Springs collect into rivers, which terminate in the ocean after fertilising the tracts through which they flow, and conducing to the prosperity of cities.

Volcanos, (Gebel-an-nar, جبلالنا,)

There are some mountains which emit fire from their summit by night, and smoke by day, (the reflection, probably, of the fire in the crater on the smoke or vapour above, visible only at night,) such as *Gebel-Sikuliah*, جبل صقاية (the Sicilian mountain, Etna,) abounding in sulphur.

There are also mountains where a gentle breeze constantly blows, as *Gebel-Bamian*, and others where a strong wind prevails, as *Gebel-Diawend*, and the mountains of *Ghour*.

Remarkable Mountains.

Here follows an account in detail of some of the celebrated mountains of the world, in which are noticed *Gebel Dibawend*, supposed to be the highest mountain in the world, where Solomon imprisoned the genii; and *Feridur*, the tyrant Zohak. A mine of red and yellow sulphur is said to occur on it. It is situated near Rai.*

On mount Ararat, (*Gebel-al-Jude*, جبل الجودي), the author states that a mosque built by Noah is still standing, and that a few of the planks of the ark were to be seen in the time of the accession of the Abbasides (about A. D. 749.)†

* The ancient Bhagæ in Persia. Modern travellers have estimated the height of Dibawend to be only 10,000 feet above the sea's level; not so high as Etna.

† Berosus and Aldyenus both declare, there was such a report in their time handed down from the Chaldæans, and the relics of the ark, according to Epiphanius, were to be seen here in his time. Sale quaintly adds—" if we may believe him."

We are told that the emperor Heraclius went up from the town of Thamanin, and saw the place of the ark. There was also formerly a famous monastery, called the Monastery of the Ark upon some of these mountains, where the Nestorians used to celebrate a feast day on the spot where they supposed the ark rested; but in the year of Christ 776, that monastery was destroyed by lightning, with the church and a numerous congregation in it. (Sale's Koran, p. 167, Note.) The height above the sea, of Ararat,

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Adam's Peak in Ceylon, is represented as Gebel-as-Serendib, جبل on the summit of which Adam alighted after his expulsion from paradise; and the prints of whose foot is said to be seen on the rock. Mines of red rubies and of diamonds occur on this mountain. These precious stones are washed down to the base by the rains and streams. Serendib is famous for its wood aloes: the women perform suth.*

Gebel-al-Kerman.—The mountains of Karamania the author states, produce a stone which when ignited, burns like firewood, (doubtless coal or mineral bitumen.)

Gebel-al-Maknatis, جبل المقناطيس The magnetic or loadstone mountain is supposed to be situate near the mountains of Kolzum, (Red Sea,) and is avoided by mariners, lest their ship be attacted by it, (hence the story in Sinbad the sailor).

Among volcanos or fire mountains, *Gebel-un-nar*, are enumerated those of Sicily and *Dibawend*; and one named *Kalsian*, in the neighbourhood of which no animal can exist, and birds even in flying over it perish.

according to the Russian traveller Parrob, is 2700 toises = 17,260 feet, more than 700 feet higher than *Dibawend*.

The Armenians call Ararat, Massissensar, or Mountain of the Ark, and it is still believed that the petrified remains of the ark exist on the summit. In a Church at Nova Schamachia, near the junction of the Aras with the Kur, a cross is exhibited, said to be made out of a plank of the ark, bestowed by an angel on an Armenian monk, who was struggling in vain to reach the top of the mountain. Ararat is stated to be of volcanic formation: pumice and lava are seen on its sides, and warm springs gush forth at its base, the existence therefore of the mines of sulphur, mentioned by Cazvini, is by no means improbable.

* The Mahomedans believe that when Adam and Eve were ejected from paradise, for eating of the forbidden fruit, Adam fell on Serendib; and Eve on the shores of the Red Sea at Judda. After the lapse of two centuries, Adam was conducted to his wife at Mount Ararat by the angel Gabriel, they subsequently returned to Ceylon, whence the human race was propagated. Adam is supposed to be of such gigantic stature, that while one foot rested on the mountain, the other was in the sea, and that the print is 70 cubits long. Knox, however, describes the print as being only about two feet long; and Moncony as two spans in length. The Buddhists of Ceylon, however, claim the print as that of the foot of Buddha left when he ascended to heaven. They call the mountain Hamalel: and the Portuguese have named it, Pico de Adam.

It is 7420 feet high, and composed of granite and gneiss. Rubies are still found around its base, though I am not aware, as before remarked, of the occurrence of the diamond in Ceylon. Garnet, the cinnamon stone, sapphire, cat's eye, and moon stone, are the only other gems of estimation which it produces. Iron, manganese and plumbago are its chief mineral products. He also mentions a volcano in Andalusia, and a hill in the same country which emits inflammable air. Also the quicksilver and red and yellow sulphur mines, and *zunjafar* of *Al Baranis* in Andalusia.*

Origin of Streams, (Fi-tawallud-al-anhar, في تولدالانهار)

Streams originate in reservoirs formed in the caves and hollows of mountains by rain, and the snow which melt in the spring. Those that come from the tops of the hills continue to flow perennially: but those that are situated in the lower parts of the mountains are soon exhausted. Their length and direction are various : some have a course a thousand *parasangs* long; all have their sources among mountains, and all terminate in the sea. Some of their water is raised in vapour by the sun, moved by the wind, and again deposited on the mountain in the form of rain and dew.

The author gives a brief account of some of the principal known rivers, and among them describes the Nile. The increase of this famous river in the hot season, when all other rivers were drying up, rendered it one of the world's wonders.

The author attempts to explain the phenomenon by the supposition of the winter rains which fall in Zanguebar, where the Nile he believes rises, being so far distant from the embouchur, that summer arrived before they could reach it. He calculates that the freshes are four months in passing through the desolate tracts of the South; two months in Abyssinia and Nubia; and one month in the regions where Islam prevails. He alludes to the absence of rain in Egypt; the Mekyas, المقياس or Nilometer; the human sacrifice at the cutting of the Khaly; and the abolition of this abominable superstition by Amru and the Caliph Omar. He mentions among the productions of the river the crocodiles, and a species of fish that causes tremor to the person who seizes it.

The theory of the inundations of the Nile being caused by the pressure of the Mediterranean raised by the northerly winds, and forcing back the waters of the river on the lands in the interior; and of the Nile

^{*} Basalt occurs at Almagro, and the Sierra de Caldeirao presents volcanic products; but I am not aware of the existence of any active volcanos in Audalusia. In the Sierra Morena, are mines of quicksilver, gold, silver, lead and copper; sulphur and vitriol are also found in some parts of Andalusia.

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falling when this pressure is taken off by the commencement of the Southerly winds, is also alluded to.*

Among other rivers described by the author are the Euphrates, the Oxus, the Indus, the Ganges. The latter is said by the Hindus to flow from heaven: and when the great men of those regions die, their remains are burned and the ashes thrown into the river, which convey them to heaven.[†] Some of the water of the Ganges is conveyed daily to the temple of Somnath, which is 200 parasangs distant. (Calculating at the rate of three miles per parasang, Somnath is 600 miles distant from the Ganges.)

The next fasl treats of the origin of

Springs, (Fi-tawallud-al-Ayun, في تولدالعيون)

which the author divides into sweet, azab, إعدب; saline, (maleh, (ملج stinking, (کبريتي afan); sulphureous, (kilriti, کبريتي); bituminous or napthiferous, (naphti, (نفطی); and those producing borax, borak, بورق. These substances are supposed to be generated by heat. Among the celebrated springs, the author enumerates the sulphur springs of Bamian, the springs of Tiberias, &c. In the next fasl on wells, those of Zemzem in Arabia, (the well into which Joseph was cast.)

The succeeding chapters treat of the animal, vegetable and mineral kingdoms, all compounds of the four elements. The author divides them into two classes, nami, زغير ذامي and ghair nami, خير ذامي ; viz. bodies having

* Some believed that the inundations were caused by the northerly winds driving back the waters of the Nile themselves: others, that the clouds which traverse Egypt, wafted over its surface by the North winds, were collected, and descend in torrents down the steeps of Ethiopia into its channel.

The Nile, however, like all other rivers that rise near the equator, commences to increase in the most Southerly portions of its course before the summer solstice. Owing to the very slight inclination of its hed, in Egypt only two inches per mile, a considerable time elapses before the freshes from Abyssinia reach Lower Egypt, the velocity of the stream rarely exceeding three miles per hour. At Thebes, in Upper Egypt, on the 18th June 1840, I witnessed the first appearance of the great annual inundation in the Nile; viz. a slight milky turbidness of the water. This phenomenon is called by the Arabs Nuktah, χ_{ini} which signifies a dot or a stain, but is also applied by the Egyptians to a dew, which is supposed to fall during the night of the rise of the Nile, though arbitrarily fixed by them to this day, is quite uncertain to a week or two.

† A little against the stream it must he confessed.

the power of growth; and bodies not having the power of growth. Animals and vegetables form the first class, and minerals the latter. Vegetables again are distinguished from animals by wanting the powers of motion and sensation: but all three are linked together by wonderful and insensible gradations.

Minerals, (Fi-al-Madaniat, رفي المعدنيان) are divided into three classes; viz. ores or metals, stones and oily-minerals.

Minerals were created before vegetables and animals.

افلزان Metals, (Filizzan, فلزان)

Metals are seven in number, viz. :--

1. Gold.—The particles of which are so close, that they cannot be separated by fire.

2. Silver.—Allied to gold, but checked in its progress by cold, and convertible into dust by fire.

3. Copper.-Allied to silver, but red, owing to the heat of its sulphur.

4. Iron.—Its blackness is owing to the heat of its sulphur. It is the most useful of metals.

5. Tin.-Rub tin with salt and oil till the latter is black. This prevents swords from rusting when rubbed on the blades.

6. Lead.—Its properties the _____ of gold, and breaking into fragments.

7. Zinc. - خارصيني Khar-sini, from China.

All the metals are supposed to be combinations of sulphur and quicksilver in different proportions, acted upon by a force or stimulus, called mineral heat, (*Hararat-i-madan*, حرارت معدن) electricity. The author treats of their medicinal virtues.

2d Class-Stones, (Al-Ahujar, الاحجار)

Transparent stones are supposed to be formed from rain drops, and opaque stones from water and earth, acted on by the sun and the *Hararat-i-madan*. Their colours depend on the matrix, or on the planets. Black is ascribed to Saturn ; green to Jupiter ; red to Mars ; yellow to the Sun ; blue to Venus ; variegated, Mercury ; white to the Moon.

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In the succeeding descriptive list of gems and minerals, in which the author quotes the names of Aristotle, Galen, Dioscorides, and Shaik-ar-Reis, we find mention of antimony, which he states to be got principally from Ispahan. *Tutiya*, blue vitriol, mines of which are said to occur on the coast of Hindustan; lapis lazuli, cinnabar, *Hajar-assinobar*; the eagle stone, *Hajar-i Akab*, جيرعتاب, the moon stone, *Hajar-al-kamr*, جيرالقهر, Pearls stated to be drops of vernal rain congealed in oyster shells. Red and white talc, *Talc*, علن ; mother of pearl, *Sadef* ; cornelian, *Akik*, تعقبق, the best of which comes from Yemen; amber, *sine*; the bezoar stone, *Pad-zahor*, *sine*, got in India from the bellies of goats and sheep. *Kartasia*, a stone found in the lower part of high mountains which at night shines,* and has the appearance of fire.

The best turquoises, Firozeh, since from Korassan.†

The *Tághi-tus*, طاغيطوس is described as a black stone with a smell of pitch, (probably coal or mineral bitumen.)

The diamond, Almas, الماس, is said to be the hardest of all things; but frangible if struck with lead, and the fragments are triangular. The diamond is found in the mountains of Serendib. In the valley (Wadi) of Baid al Kamr, بعيد القرب pieces of flesh are thrown into the valley to which the diamonds adhere. The vultures pounce down on the pieces of flesh and bring it up.[‡]

The diamond is used by jewellers to bore other stones.

The loadstone, *Maknatis*, مقناطيس is found in India; a red stone with black strips or lines, attracts iron. When a ship approaches the land of the loadstone, if it contains iron, it is attracted and cannot be separated.

^{*} I was informed by Mr. Fischer, that from the magnesite excavations dug near the foot of the Salem mountains, emanates a phosphorical light which alarms the superstitious Hindus; but it is not certain whether the light proceeds from the exhalations or from the mineral.

⁺ The turquois is a gem peculiar to Khorassan; the best mines are near Nishapur and Firozkoh. It occurs in veins in trap; its colour is owing to copper.

[‡] The story of the vultures bringing up the diamond with the pieces of flesh, again reminds one of the Arabian Nights, as also the notice of the loadstone.

The ruby, Yakut ياقون Rubies are of different colours; yellow, green and blue, (the sapphire ?) but the best are red.

The ruby comes from the Southern cities near the equator. Its beauty is increased by exposure to fire.

3rd Class.-Oily Minerals, (Duhniat, د بنمان)

Quicksilver, sulphur, bitumen, naptha, &c. are presumed to be produced by the warmth of the earth's interior acting upon its juices. Ambergris is thrown up by the sea. Some say it is the production of a marine animal, or of a fountain in the sea; while others assert, that it falls in dew on rocks in the sea.

Mumiyai, مومياي is produced like mineral bitumen from the earth, in the land of Mosel and Persia. It is of a more precious nature than pitch, and used extensively in medicine in spasmodic affections, palpitations; and externally, mixed with other substances, for bruises and fractures.*

Plants, (An-nabat, النبان)

Here follows a description of plants, which are supposed to be between minerals and animals, and divisible into two great classes, viz. :--

1st. Those that possess high trunks, as trees.

2nd. Those which do not, as grasses.

Plants are supposed to be endowed with the powers of reproduction, increase, digestion, retention, attraction, &c.

The descriptions are short and unsatisfactory, containing a number of singular stories, many incredible, regarding the properties and medicinal virtues of plants; but among which may be easily discerned the glimmerings of a few useful truths. The Persian manuscript contains coloured drawings of many of the trees, which bear but a remote resemblance to nature. Among the trees are enumerated, ebony, oak, the camphor tree, sandal wood, the almond, the orange, the lime, the citron, the filbert, plaintain, cocoa, the palm, the date, the cypress, the balsam, the apple, the mulberry, peach, fig, pomegranate, olive and quince,

* The Mum-i-Ayi, the Soap of Ayi, is a black bituminous substance that oozes from a cavern in a bill called the Kop-i-Mumiyai, near the village of Ayi, not far from the route from Sheraz to Darabgerd. Formerly the door of the cave was guarded, and opened once a year, and the Mum that had collected during the year (in size not larger than an orange) taken out and deposited in the Shah's treasury. It is valued in Persia at a much higher rate than its weight in gold. 1844.]

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the sumach, sandarach, fir, jujube, pepper, vine, the clove, the cane, apricot, rose, jasmin, &c.

In the second class we find the cotton plant, squills, saffron, oldenlandia, sesame, coloquintida, endive, spinage, turnips, cucumber, Egyptian and China beans, lentils, mustard, radish, onions, ginger, the violet, wild rose, southernwood, sweet basil, the tulip, lily, narcissus, &c. Like the minerals, the trees and shrubs are usually classed alphabetically.

Animals, (Al-Hywan, الحيوال)

Divided into seven classes; viz. man, genii, the horse, the ass, mule, camel; cows; sheep and deer, beasts of prey, birds, reptiles and insects.

The author states, that animals were created with limbs best adapted to their wants : among animals man ranks first ; the author enters into a dissertation on the faculties of man, the prophets, saints, &c. ; production and generation of man ; his anatomical structure and physiology. He supposes the difference of colour among the human tribes to be occasioned by the sun ; that the Arabs rank highest among the races of the earth's descendants of Ismail, whose residence is West of the second clime. The religion of the Arabs was originally that of Abraham.* They lapsed into idolatry ; the worship of the stars, angels, &c. The chief of Arabs, Omar Bindahi, is said to have been the introducer of idolatry among these followers of Abraham, which he imported from the land of Balka, (Balkh ?). The Arabs according to the author, were the most eloquent of the nations on earth.

The Persians.

The Persians are described as descendants of *Tamùras*, inhabiting Iran in the 3rd clime, and rank next to the Arabs.

They were idolaters and adored the stars (Sabians,) till the time of Gushtasp, son of Zohrab; when instructed by Zoroaster, the descendant of Manochehr Malek, they with their monarch, became worshippers of fire.

^{*} Abraham is said to have been originally an idolater, like his father Azer, the idolmaker, and son-in-law of Nimrod; and worshipped the stars, moon, and planets; but who afterwards, according to the Koran, directed his face to Him who created the heavens and the earth, and overthrew idolatry.

Famous Men of Persia.

1st. Feridún the Just, the conqueror of the tyrant Zohak.*

2nd. Iskander (Alexander the Great,) son of Dara (Darius), son of Bahman, whose prime minister was Aristotle; the conqueror of Greece, Asia Minor, India and China. He died at the age of 32.

3rd. Noushirwan, son of Kobad, born in the time of the Prophet; unrivalled for justice.

4th. Bahram Gour, son of Yezdijird, renowned for skill in archery.

5th. Rustam Zal, who witched the world with noble horsemanship.

6th. Jamasp, the astronomer, who wrote a book on the conjunctions of the planets, foretold the advents of Jesus and the Prophet, and the decay of the religion of the Magi.

7th. Bazrchemher, son of Bakhtaghin, vizier of Noushirwan, the introducer of the game of chess from India.⁺

Sth. Barid, celebrated as a musician in the service of Kusro Parviz.

9th. The sculptor of the statue of the horse Shabdez, so exquisitely carved, that it is said to be the work of the genii.

10th. Ferhad, the sculptor, who excavated the canal of Kasr-i-Shirin, تعمرشيرين; the cave of Shirin. He is said to have drawn the likeness of his mistress Shirin on the palace walls with such incomparable art, that all who gazed on it became mad (enamoured.) Shirin (Irene,) was the beautiful wife of Kusro Parviz, and said by some to be a Christian.

* The name of the Assyrian tyrant Zohak, is still held in detestation in Persia, and the national bauner was the apron of the blacksmith who slew him, till the Mahomedan conquest.

t It may be remarked that the author, with other Persian writers, ascribes the origin of this almost universal and princely game to India and not to China; the Arabian and Persian term for chess, Shatrunj, شطرنی is evidently a corruption of the Sanscrit name of the game Chatrang, (चत्रा). It is thought that the game was introduced into Europe, by the Crusaders, or by the Moors, who conquered Spain. The earliest practical work on chess is that of Lucena of Salamanca. His Treatise is named "Arte breve e introduccion muy necessaria para saber jugar al Axedres, conciento y cincuente juegos de partido, Salamanca, 410. about 1495.

The earliest mention, however, of chess occurs in a set of Latin verses, quoted by Hyde, and which is said to have been written in the time of the Saxons, and therefore long prior to the Crusades. Before 1200 A. D. Jacopo Dacciesole, a Dominican Friar, wrote a Treatise on chess, called "Solatium scacchorum, scilicet libellus de moribus hominum et officies nobilum." Bazrchemher, who is said to have introduced chess from India into Persia, flourished in the 7th century after Christ. 1844.]

Some believe the statue of Shabdez to have been the performance of *Ferhad*.

The Rúmis,

Rúm is a name given by the Arabs to Greece and part of Turkey.

The Rimis are descended from the progeny of Syaz, son of Ishak, (Isaac.) They dwell in the Western parts of the 5th and 6th climes, and are a sensual race, *Zohreh* (Venus) being dominant.

The Religion of the Rúmis.

Anciently, philosophy prevailed: their princes were then sages. Subsequently they adopted the tenets of the Nazarenes, (Christians.) There are three sects; the first, the Malekanis, call Jesus the Messiah, the son of God; the second aver that He is God Himself, the Holy Spirit, and the Messiah; while the third, the Yakúbis say, that he is of God. The author, after remarking on the customs of the *Rúmis*, proceeds to mention the Turkomans and Tatars.

The Turkomans and Tatars

are a fierce and choleric race, inhabiting the tracts lying to the eastward of all the climes. Mars dominant.

Religion.

They have no fixed religion: some worship the sun, and others are followers of *Mani*.*

The Hindus.

The Hindus inhabit the Eastern parts of the 1st and 2nd climes. They are in general believers in the metempsychosis. A few believe in the great God, but deny the prophets. They are idolaters.

They had a prince called Brahma, whom they look up to as the Imam of their faith, and from whom descended the Brahmans.

They do not deprive animals of life, and abstain from eating their flesh. The author notices, among the customs of the Hindus, that of *Suttees*; of burning the dead; of brothers marrying one woman, (as practised in Nepaul and on the Malabar Coast.)

^{*} Mani is the Painter paraclete of Persia, who having jumbled together the doctrines of the gospel; the metempsychosis of the Brahmans; the two great principles of the Zoroastrian faith; viz. those of good and evil, or of light and darkness with the tenets of the Koran, founded the sect of Manichæans, and enrolled in its ranks Christian Bishops and Patriarchs, Mussulmans and Fire-worshippers. This impostor lived in the reign of Shapur, son of Ardeshir, king of Persia, and was put to death in that of Bahram, grandson of Shapur.

He also narrates a curious story of seven sages being called to the presence of Brahma, who propounded to them the three following questions:—

1st. Whence do mortals come?

2d. Whither do they go?

3d. Why have they come ?

The answers of the sages to these metaphysical queries are as satisfactory as might be expected; they acknowledge their ignorance, and utter incapability to approach these great mysteries of the objects of the creation.

The author avers, that the statements of the Hindoos regarding their religion are various and conflicting; some believe that this existence is one of misery, and that the next will be one of bliss.

Many, in order to escape this state of wretchedness, put a period to their existence.

The Zengs.

The Zengs inhabit the Western parts of the 1st clime. They are a despicable race, and deficient in intellect.

Their countenances are blackened by the heat of the sun; yet they are a cheerful people, owing to the evenness of their disposition; or to the influence of the star *Soheili*, (Canopus,) which dominates over this region.

The Nubians.

The Nubians have many cities, and an extensive territory South of Egypt. They are of estimable qualities, and profess the religion of the Nazarenes.

The Berbers, (Natives of Barbary.)

The Berbers inhabit the Western parts of the 3d clime from Barca, برقة to the extreme West, which is bounded by the *Bahri Mohit*, بحر محيط the ocean. They say the Berbers are the remnants of the tribe of *Jalút*. بالون: Jalút is the name of Goliath and Jalutieh of the dynasty of Philistine kings at Tangiers. I was informed by the Jews, that the Berbers there were genuine descendants of a colony from Philistine.

The People of the Mountain, Juie on

Three tribes on the shore of the sea of Kharez between it and Cazvin, professing different religions, and always at war; some are *Hanbalis*, others *Shafihis*, and some Nazarenes.

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They are different in manners and dress from all other men.

The author describes many singular customs practised by these tribes.

The Trades or Arts,

The arts were decreed by God, and resorted to by man on account of his necessities.

The art of ploughing, (*Al-falahat*, الفلاحت) and that of the shepherd, the author justly ranks first. He then treats of soils best adapted for different sorts of grain, fallowing of ground, &c., of devices to produce grapes without stones, and grapes of different colours. Also to produce sheep of different colours, by a process similar to that which Jacob had recourse to; next follows the art of the chace; hunting the elephant; catching of birds and fishes, &c.; then the manufacture of cloth; the art of building and selecting sites for towns and cities. The craft of the blacksmith and worker in metals succeeds, and the name of the man who made the first sword in the world; viz. Tabal, jj;

The author mentions the conversion of iron into steel, by heating it and plunging it into pomegranate water or buttermilk two or three times.

The first ship-builder as connected with the art of the carpenter, Annajaret, نناريا is said to be Noah.

To ship-building follows commerce or trade, with the author's instructions how to select the principal articles of traffic. The best swords, he informs us, come from India; the finest paper from Samarcand; the best bows from Damascus; the choicest musk from Thibet, and the most inferior that from Hindoosthan. The best ambergris, we are told, is that on which black and white are mingled.

Arithmetic,, *Hissab*, مساب and writing, *Al-kitabet*, الكتاب: follow. The chapter on the former clearly shows, that the decimal system of the Arabs was deduced from the fingers of the hands, which were resorted to as natural collections for reference, in computing.

To these succeed the arts of luxury ; versification and music ; medicine ; strange diseases ; remedies ; cosmetics ; dyeing the hair ; sexual infirmities ; astrology ; uses of the astrolabe ; magic squares ; talismans, &c. ; cunning stratagems of men and women ; ending with a description of geniis and devils; ghouls; beasts; birds; reptiles, and wonderful animals.

In the chapter on the art of writing, specimens are given of the Hebrew, the Syriac, Kebti or Coptish and Hindi characters. In his description of music, (Al Musiki, If $mov\sigma\nu\kappa\eta$) from the Greek $\mu\sigma\nu\sigma\nu\kappa\eta$) the author is a little more poetical and refined than Rousseau, whose well-known definition of this science; viz. "L'art de combiner des sons d'une manière agréable a l'oreille," has been so generally and inconsiderately adopted. Cazvini styles music to be an essence emanating from the soul, exciting its best emotions, and even curing disorders. The rules of its composition he assimilates to those of poetry. He notices also its wonderful power over the base instincts of the fiercest animals.

Astrology, which the author defines as the science of predicting the destinies of empires, religions, nations, tribes, families and individuals, from the conjunctions of the stars and the aspect of the heavens, can only be practised by a pure and chaste person.

The two first are known by the great conjunctions that take place once in a millennium. The fate of nations and families by the conjunctions occurring every 240 and 20 years. Events of a year are foretold by the horoscope of that year; and of a day, by the conjunction of the planet. A person's nativity is calculated from the aspect of the planets at the time of his birth.

The astrologers of old, like those of modern times, placed much faith in the times just preceding the rising and culmination of the signs of the Zodiac, or the 12 mansions. A mansion, about to rise, is called the ascendant or house of life, and that just rising, the horoscope, or house of riches.

Over these houses the seven planets were thought to rule. Charms written at the precise time when a certain planet is rising in one of those mansions, are supposed to have certain powers. For instance, one written when Mars or Saturn, (both unpropitious,) is in the eighth mansion, or that of death, would be supposed to exert a very baneful influence. Whereas the presence of Venus or Jupiter, in the 7th or 10th houses, those of marriage and dignities, would be thought productive of nothing but happiness.

The natives of India, and indeed of all the East, still rule the important actions of their lives by the stars; the inauspicious portions of each day are carefully noted in their almanacs, which are as regularly compiled every year as the Nautical or Moore's. Of a Takwim, تقويم or almanac for the present year 1844, I have given a short account to the Royal Asiatic Society. It was compiled by a learned native of Alpoor on the Tumbuddra, in the Nizam's territory, a few miles from Kurnool. Mars is stated to rule over the warlike destinies of the year, and hitherto has not belied the faith placed in his fiery influence.

Many of the Mussulman inhabitants of this place never undertake a journey or marriage, until the stars indicate a fortunate moment; for which they consult their tables. Most of them have their nativities regularly calculated, and even in the naming of a child they often give him a name commencing with the initial letter of the planet which presides over the particular day or hour of the day in which the child is born; for instance, if a child happen to be born on Tuesday, they give him some name commencing with M, such as Mahomed, Murad, Mahsum, &c. since *Marrikh* or Mars, rules over that day, or at least the first hour of the day after sunrise.

Genii and Devils.

Genii are supposed to be formed from the *flame* of fire, angels from the light, and devils from the smoke. Genii differ from angels because they procreate, eat, drink, and are mortal : but devils do not die until the end of the world. The genii are said to have inhabited the world before Adam, and to have been expelled and imprisoned on account of their rebellious conduct. Some are good, some evil, some infidels, others believers : their bodies are transparent.*

In the descriptions of the quadrupeds, &c. with which the work closes, an account of the *Gour*, the elephant; rhinoceros, tapir; the *Sanad*, wile an animal resembling the elephant, but smaller; a species of black tiger; the simurgh, or phœnix, of which a strange-looking painting is given; hoopoe; ostrich; dragon, &c.

• The race of genii is occasionally alluded to in the Koran. According to the Magi of Persia, one of the genii presides over each day and month of the year, and the belief is, their existence was prior to Mahomedanism. Jan and Marija are said to be the parents of this race. They are supposed to have the power of rendering themselves visible or invisible at pleasure. *Malek Gatshan* is their king, and is enthroned on mount Caucasus. Some evil genii are still supposed to groan in prison for wickedness against the Almighty, committed at the instigation of Iblis; the remainder dwell in the lowest firmament at the poles, the confines of the earth, mount Caucasus, and a few in paradise. Among the strange animals the author enumerates Gog and Magog, a fierce race who devastated the earth, and whom Alexander the Great is supposed to have subdued.*

• In the Koran it is stated that Alexander the Great travelled from the south to the north, "until he came between the two mountains heneath which he found a certain people who could scarce understand what was said. And they said, "O Dhulkarnein, verily Gog and Magog waste the land; shall we therefore pay the trihute on condition that thou build a rampart hetween us and them ?" A wall was built hetween the two mountains with iron and brass, which Gog and Magog could not scale, nor dig through. Some say that this wall is situate in Armenia and Adherhijan: others on the confines of Turkestan; hut I cannot help forming the idea, that the tradition hears allusion to the great wall of China, which spans 1500 miles of its N. frontier from the Yellow Sea to the Lingtoo Mountains; huilt 2000 years ago, to restrain the hordes of Mongol barharians, who for ages past were wont to devastate that granary of this portion of the East, the great plain that occupies to the extent of 210,000 square miles of Europe.

Proceedings of the Asiatic Society for the month of August, 1844.

Wednesday Evening, the 7th August, 1844.

The usual Monthly Meeting took place on Wednesday evening, the 7th August, at $8\frac{1}{2}$ F. M. The Honorable the President in the Chair.

C. F. Buckland, Esq., C. S. was elected a Member of the Society, and the usual communication was ordered to be made to him.

New Member, Captain Mackenzie, B. N. I.

Proposed by the Honorable Sir H. T. Maddock, seconded by the Honorable the President.

The following list of books presented and purchased, was read :--

Books received for the Meeting, on the 7th August, 1844.

1. The Meteorological Register for January 1844. From the Surveyor General's Office.

2. Transactions of the Society of Arts, Vol. LIV. for 1844.—Presented by the Editor.

3. The Annals and Magazine of Natural History for 1844, Nos. 156, 157 and 158.-Purchased.

4. The London, Edinburgh, and Dublin Philosophical Magazine, 3d series, Nos. 156, 157 and 158.—Presented by the Editor.

5. The Calcutta Christian Observer, for June and August, 1844.—Presented by the Editor.

6. Journal Asiatique, ou Recueil de Mémoires 1844, No. 9.—Presented by the Editor.

7. The Oriental Christian Spectator, July 1841 .- Presented by the Editor.

8. Proceedings of the Academy of Natural Sciences, two Nos. Vol. II, January and February 1844.-Presented by the Editor.

9. The Palms of British India, from the Calcutta Journal of Natural History.--Presented by Dr. W. Griffith.

The Athenæum for May 4th, 11th, 18th, 25th and June 1st 1844, from the Editor.
 The Singapore Tide Register in six sheets.—From Government.

12. A general Catalogue of the Fixed Stars, from Observations made at Madras in the years 1830, 1843.—From Government.

13. Meteorological Register kept at the Honorable Company's Observatory Madras. -- Presented by Government. 14. Sixty-eight spare Nos. of the Asiatic Journal for the years 1833, Nos. 12; 1834, Nos. 10; 1837, Nos. 6; 1838, Nos. 9; 1840, Nos. 12; 1841, Nos. 12; 1842, Nos. 12; 1843, Nos. 3.—Presented by John Marshman, Esq.

15. Lardner's Cabinet Cyclopædia, on Electricity, Vol. II.-Purchased.

16. Ayeen Akbery, or the Institutes of the Emperor Akber, Vol. II,-Presented by F. S. Owen, Esq.

17. General Register of the Bengal Civil Service, from 1790 to 1844. - Presented by the Author.

18. The Dahistan, or School of Manners, Translated by Shea and Troyer, 3 Vols.--From the Oriental Translation Committee.

19. Ibn Khallikan's Biographical Dictionary, translated by McGleckin de Slane, 2d Vol. From the Oriental Translation Committee.

In reference to the donation of 68 spare numbers by Mr: Marshman, the Sub-Secretary stated, that he had been fortunately enabled to supply that gentleman with one of the early numbers to complete his set, but that as these numbers were often inquired for and very scarce, though many, no doubt, might be in existence; it would be desirable to make it known that the Society would be thankful for all spare and odd copies of the Journal which might be scattered about in private hands,[•] and would in exchange be happy to assist in completing volumes.

Read the following letter from Messrs. W. and H. Allen and Co. the Society's London agents :---

H. TORRENS, Esq. Vice President and Secretary to the Asiatic Society of Bengal.

SIR,—The six cases of Books consigned to our care by the "Britannia," have been duly received and forwarded to their respective addresses. The duty and other expenses on the Books will be repaid to us by the institutions receiving them. We have the pleasure to enclose you receipts for the cases.

The Heads of Trinity College, Dublin, have intimated their wish to send your Society a case of books in return for those received from you. We have offered our services in forwarding them to India.

Nothing has yet been heard of the "Earl of Hardwicke."

We have the honor to be, Sir,

Your faithful servants,

WM. H. ALLEN and Co.

London, 31st May, 1844.

And the following from his Grace the Lord Primate of Ireland, Chancellor of Trinity College, Dublin.

H. TORRENS, Esq.

 S_{1R} ,—I beg to acknowledge the receipt of your letter accompanied with a case of books from the Asiatic Society for the Library of Trinity College, Dublin, and I am requested by the Provost and Fellows of the College, to express their thanks to the

* As in the Mofussil, whence we should be happy to pay the banghy-postage, partiularly for early numbers.

Asiatic Society for this valuable and acceptable present. I am also requested to inform you, that the Heads of the University assent with pleasure to the proposal of the Asiatic Society relative to a reciprocal presentation of recent publications. An order has, in consequence, been given to their booksellers to prepare a box of books lately issued from the University Press, for immediate transmission to London, to be thence forwarded to the Society. It will contain the eleven volumes of Archbishop Usher's works already republished, and some other works. As soon as the new edition of the Archbishop's works shall be completed, another box of books will be forwarded. 1 am, Sir,

London, 13th May, 1844.

With much respect, your obedient servant, JOHN G. ARMAGH.

From M. de Villemain. Ministre, de l'Instruction Publique a Paris.

Monsieur, ----, J'ai reçu la lettre que vous m'avez fait l'honneur de m'écrire pour m'informer de l'envoi que vous a fait la Societé Asíatíque de Calcutta, d'une caisse de livres orientanx qui vous paraîtraient destinés à être offerts au gouvernement Fran cais.

Je vous prie, Monsieur, de vouloir bíen m'addresser ces livres á Paris, par la voie que vous jugerez la plus convenable, en ayant soin de faire suivre les frais qui résulteront de cet envoi et que j'aurai soin de faire acquitter aussitôt que les livres me seront parvenus.

Recevez, Monsieur, l'assurance de ma considération distinguée.

Le Pair de France.

Ministre de l'Instruction Publique,

Paris, le 18 Mai, 1844. Signature VILLEMAIN. A Monsieur Allen, libraire de la Compagnie des Indes Orientales, à Londres.

Official receipts for similar dispatches of books were also enclosed by Messrs. Allen and Co. from the Very Reverend the Vice Chancellors of the University of Oxford and University of Cambridge, the Prussian Consul General, and the Consul General of the Netherlands.

Read the following letter addressed to the Society by W. Prinsep, Esq.

H. TORRENS, Esq., Secretary to the Asiatic Society, Calcutta.

SIR,-With reference to the orders received from you, as a Member of both the Committees for procuring the portraits of Sir Ed. Ryan and of H. T. Prinsep, Esq., 1 beg leave to advise you, that being without any remittance for the purpose of paying to the artists the first half of their demand, which is the invariable custom, I have recommended to Sir Ed. Ryan and my brother the course they have adopted this day. and I have now to request that you will meet with due honor, a bill drawn at 10 days' sight in favor of Messrs. Roberts, Mitchell and Co. for Co's. Rs. 1,142-13-8, being the equivalent of £100 negociated at 1-9, the exchange of the day. The bill is signed by Sir Ed. Ryan, H. T. Prinsep and myself, and you can appropriate the half to each fund in your hands, as we shall here pay £50 to each artist on account. I am happy to say, that the likenesses of each promise to be excellent. I trust you will at once remit the remainder of each fund, so as to enable me to complete the arrangements and provide proper frames and packing cases for them.

I remain, Sir,

London, 7th June, 1811.

Your most obedient servant. W. PRINSEP. Proceedings of the Asiatic Society. [Aug. 1844.

The Secretary stated that the bill had been duly honoured, and read also parts of a private communication from Mr. Prinsep, stating that the Society might have casts of the marble busts now executing of Mr. H. T. Prinsep and Sir Charles Metcalfe for $\pounds 5$ each, which was gladly sanctioned.

W. PRINSEP, Esq., care of Messrs. RICKARDS, LITTLE AND Co. of Bishop's Gate Street, London.

S1R,-1 have the honor, by desire of the Asiatic Society of Bengal, to acknowledge the receipt of your letter dated London the 7th June last, advising a bill of exchange in favour of Messrs. Roberts, Mitchell and Co. for Co's. Rs. 1,142,13-8, being the equivalent of £100, exchange at 1-9 per rupee, for the advance paid by you to the artists for the portraits of Sir Edward Ryan and H. T. Prinsep, Esq., which you are empowered to procure. The bill was presented on the 23rd ultimo, and paid to Messrs. Carr, Tagore and Co. on the 5th instant, to whom it was made payable by the drawers.

The balance of the subscriptions for the portraits will be remitted to you by an early opportunity, and 1 am requested to express the satisfaction of the Society that the likenesses promise to be excellent. 1 am, &c., Calcutta, Asiatic Society's Rooms, the 13th August, 1844. H. TOBRENS.

Read the following letter in reply to the Society's recommendation of M. Callery's translation :---

No. 386.

From T. R. DAVIDSON, Esq. Officiating Secretary to the Government of India, to H. TORRENS, Esq. Vice President and Secretary Asiatic Society, dated the 20th July, 1844.

Home Department.

S18,-1 am directed by the Governor General in Council to acknowledge the receipt of your letter dated 4th instant, and to state in reply, that the Government of India has already subscribed for 15 copies of Monsr. Callery's translation of the Chinese Encyclopædia of the Emperor Kang-hi.

> I have the honor to be, Sir, Your most obedient servant,

T. R. DAVIDSON,

Officiating Secretary to the Government of India.

Council Chamber, the 20th July, 1844.

Read the following letters from the Officiating Secretary to Government

of India, and the Secretary Public Department, Fort St. George :-

No. 383.

From T. R. DAVIDSON, Esq. Officiating Secretary to the Government of India, to

H. TORRENS, Esq. Secretary Asiatic Society, dated the 20th July, 1844. Home Department.

 S_{1R} ,—In compliance with the request of the Government of Fort St. George, 1 am directed to forward herewith for the use of the Society, a copy of the Meteorological Observations recently published at Madras.

I have the honor to be, Sir,

Your most obedient servant,

T. R. DAVIDSON,

Officiating Secretary to the Government of India.

Council Chamber, the 20th July, 1844.

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No. 577.

To the Managing Committee of the Literary Society at Calcutta.

Public Department,

GENTLEMEN,—I am directed by the Most Noble the Governor in Council, to transmit to you the accompanying copy of the 6th volume of the Madras Astronomical observations, recently published at this Presidency.

I have the honor to be, Gentlemen,

Fort St. George, 29th June, 1844. Secretary to Government.

Read the following letters from the Secretary to the Superintendent of Marine, and Under-Secretary to the Government of Bengal:---

No. 492.

To H. TORRENS, Esq. Secretary to the Asiatic Society.

S18,-I have the honor, by direction of the Acting Superintendent of Marine, to forward to you the accompanying copy of a letter No. 1147, dated the 29th April last, from the Under-Secretary to the Government of Bengal, together with copies of the Tidal Registers which accompanied it.

I have the honor to be, Sir,

Your most obedient servant,

J. SUTHERLAND,

Secretary.

Fort William, Marine Superintendent's Office, the 30th July, 1844.

No. 1147.

From Under-Secretary to the Government of Bengal, to Lieut. Col. A. IRVINE, C. B. Acting Superintendent of Marine, dated Fort William 29th April, 1844.

Marine.

SIR,-I am directed to transmit to you, for information and record, the accompanying Tidal Registers, kept at Singapore during the months of June, July, August, September and October, 1842, and to request that copies thereof may be forwarded to the Asiatic Society. I have, &c.,

(Signed) CECIL BEADON, (True Copy.) Under-Secretary to the Govt. of Bengal. Fort William, Marine Superintendent's J. SUTHERLAND, Secretary. Office, the 30th July, 1844.

Read the following paper from the Secretary to the Government of India, Foreign Department:--

No. 1542 of 1844.

From W. EDWARDS, Esq. Under-Secretary to the Government of India, to the Secretary to the Asiatic Society, dated Fort William, the 6th July, 1844.

Foreign Department.

S1R,-By direction of the Governor General in Council, I have the honor to transmit to you, for such notice as the Society may deem it to merit, the accompanying copy of lxxviii

a report by Lieut. Cruttenden, Assistant Political Agent at Aden, on the Mijjertheyn tribe of Somallees, inhabiting the district forming the North-east point of Africa.

I have the honor to be, Sir, Your most obedient servant, W. EDWARDS, Under-Secretary to the Govt. of India.

Fort William, the 6th July, 1844.

This valuable paper was referred to the Editors of the Journal for early publication.

Read a letter from Mrs. Greenlaw, widow of the late C. B. Greenlaw, Esq. presenting to the Society a handsome model of the Steamer *Enterprise* (the first steamer which came round the Cape[•]) carved from a piece of her keel.

Read the following letter from Dr. Wallich, Superintendent H. C. Botanical Garden, accompanying the splendid donation to which it refers :--

To H. TORRENS, Esq.

MY DEAR SIR,—Will you do me the favour to present to the Asiatic Society, at their next meeting, a tolerably good skull of the Hippopotamus. It was the best I could procure at the Cape. I brought it with me from thence about a month ago, and Mr. Blyth was put in possession of it soon after my arrival.

In case the Society should think that I could be of service in procuring objects of Natural History from South Africa; I should be happy to assist in the best way I could. I have the honor to remain,

My Dear Sir, Your sincerely, N. Wallich.

Botanic Garden, 31st July, 1844.

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Read the following note from the Revd. Dr. Hæberlin on the reference which had been made to him of the letter from the Royal Bavarian Academy of Munich :--

MEMO.—The "Royal Bavarian Academy of Sciences" at "Munich, has for the comparatively short period of its existence acquired a great renown for its scientific researches, which include oriental studies, and deserves, therefore, the acknowledgment of the Asiatic Society of Bengal. Having been honored by the Academy with the proposal of an interchange of our respective publications, it appears to me highly desirable for our Society, and it is to be hoped mutually advantageous, to accede to the proposal. Dr. Von Martius (in his letter,) states, that only certain parts of our Journal were accessible to the Academy. These parts being lodged in the Royal Library at Munich.

I am of opinion, and would accordingly recommend, that in token of our readiness to enter into the proposed intercommunication, we send at once (instead of completing the volumes in the Royal Library,) a complete copy of our Journal from the commencement, and engage to continue the same, as well as a copy of Researches hereafter to be published by us. At the same time, I think we should express our desire to be favored in return with all the publications of the Academy.

Calcutta, 23d July, 1844.

The Secretary remarked, that it would be very difficult now to supply a complete set of the Journal, as the early volumes were very scarce; and after some conversation it was resolved, that as complete a copy as could be obtained of the Journal, should be forwarded to the Bavarian Academy.

Read a letter from the Societé Geologique de France, expressing a wish to receive the Society's Journal, and to correspond with it.

The Secretary stated, that only two volumes of the Journal of this Society's Proceedings, vols. 1835 to 1837 had been received, and he proposed to write to them, stating this, and requesting to know what volumes it had received of the Journal, so that the two Societies might renew their very desirable exchange of works, without the chance of sending duplicates.

Read the following letter from the Rev. Mr. Mack, Serampore College, who had kindly sent the two coins to which it refers for the Society's iuspection :—

MY DEAR SIR,—The coins (one gold, and the other silver,) which were dug up in the Soonderbuns, and belong to Serampore College, will be found, I believe, to agree very closely with some of those which have been figured by Mr. Prinsep.

The gold coin was dug up on the estate lately belonging to Serampore College about the year 1835; the other was obtained about the same time, but whether from that estate or one adjoining, I cannot tell. The estate belongs to that part of the Soonderbuns on which there are few or no Soondery trees, which is not Virgin Forest, but has innumerable trees of former inhabitants. Amongst other things we found a potter's kiln, that is, a mass of little lamps or churags, and similar saucer-like dishes, which had evidently never been moved from the kiln. They were much superior to the ordinary manufacture of similar articles of the present day. The material was fine, and the surface perfectly clean and smooth, although they had lain so long in the salt soil. They appeared to me of much the same consistence as the fine

J. HÆBERLIN.

tiles and bricks I have seen in the old temples of Assam, which the present inhabitants of the province cannot imitate.

Serampore, 6th June, 1844.

I remain,

Your's faithfully,

JOHN MACK.

P.S.-My friend, Mr. Bonnaud, will oblige me by taking the coins to the Asiatic Society's Museum for you, and I shall feel obliged by their early return and the fruits of your examination of them.

The locality in which these coins were found excited much speculation; and it was agreed, that if not already published, they should be lithographed for the Journal.

Read the following letter from S. G. T. Heatly, Esq. with the specimen sheets of the work referred to.

H. TORRENS, Esq.

MY DEAR SIR,—I request your good offices with the Asiatic Society to obtain its permission, that I may inscribe a volume on mathematical analysis now passing through the press, with its name.

It is not ordinarily that Societies are the object of dedications, but you can appreciate the feeling which (a humble member of it,) I wish to express for the labours of the oldest scientific association in India, and nearly the only one.

The book is entitled the "Theory of Functions." I undertook it some years ago to combine into one homogeneous body, all our knowledge in that department; since then the later labours of Canchy, Lionville, Hamilton and De Morgan, working in separate veins have illustrated somany obscure points, and developed connexion between subjects apparently so dissimilar, that I resolved to commence a second edition, without publishing the first; nor has the lately completed volume of Professor De Morgan done much in the peculiar field which I have marked for my labours, unequalled though that volume be in English mathematical literature for its extent of matter, rigour of demonstration, and clearness of lauguage.

My "Theory of Functious" will be adapted to the purposes of mathematical education, and containing all the important results of modern analysis, especially those which are essential in the pursuits of physical science.

A few pages of the first edition will enable you to judge of the work.

Your's sincerely, J. G. F. HEATLY.

August 6, 1814.

The Secretary was desired to express to Mr. Heatly, that the Society would feel much gratified by his proposed dedication, and that it would look forward with pleasure to the appearance of a work of this high order in India.

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Read the following letter from Capt. H. L. Bigge, 1st Assistant to the Commissioner of Assam. The curiosities to which it refers were on the table.

To H. PIDDINGTON, Esq., Asiatic Society.

MY DEAR SIR,—I have the pleasure to send a few curiosities from China, which, if you think them worthy the notice of the Memhers, you will oblige me by putting on the table for the Meeting this evening.

1 Chinese Pistol, 3-barrelled.	4 Anatomical Drawings.
1 Cross Bow, ditto.	1 Chinese Tea Urn.
1 Pipe, 2 Lamps, and 1 Seal.	Mineralogical Specimens.
1 Deer's Head, (Chusan.)	1 Model of Door Latches.
	Yours sincerely,
No. 41, Park Street.	H. L. BIGGE.

The Secretary stated, that having written to Mr. Secretary Edwards for the map accompanying Major Mackeson's route to Sirsa and Bahawulpore, of which the report had heen sent to the Society for publication hy Government, and was now at Press, he had been informed that the map was now printing at the Government Lithographic Press, and that the Society could be supplied with copies; in return for which, he had offered to Government such number of the printed report as it might require, so that the utility of the map would be much increased by distributing the printed report with it.

He also stated, that Raja Kalee Krishna Bahadoor had sent to the Sub-Secretary for perusal, a private letter from M. Garçin de Tassy, thanking the Raja for having sent him a very rare and valuable Persian MSS. of the Atesch Kada, of which an account had heen published in the last No. of the Journal of the Royal Asiatic Society of London, by Mr. Bland.

Upon enquiry, he regretted to say, that the Raja had not preserved a copy before sending it, and he requested to be authorised to procure one, if possible, for the Society's Library, which was sanctioned.

J. Owen, Esq. of Assam, presented in addition to his kind donation of the Ayeen Akherry, two halls of the opium-rags as prepared by the ryots of Assam, for sale and common consumption.

These are small, long, strips of narrow rags, on which the fresh opium heing collected from the poppy head is smeared, and the whole rolled up into a hall about the size of a small hen's egg, and carried about for daily use, Proceedings of the Asiatic Society. [Aug. 1844.

or sold as merchandise in all the bazars. Opium was stated to be the most profitable crop raised by the cultivators.

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An engraved proof portrait of Rammohun Roy was presented by the Sub-Secretary, and it was suggested that the Society might, with great propriety, as occasion offered, collect such portraits of remarkable individuals, whether Natives or Europeans, who have distinguished themselves in literature or science in India, and more especially of such as have also been Members of the Society.

The Secretary announced with deep regret to the Society, the death of an old and highly-talented associate, and formerly a valuable servant of the Society, Dewan Ramcomul Sen, a gentleman not less distinguished for his great attainments, his enlightened views, his steady attachment to the cause of education, and his untiring energy and industry in every good and useful work, by which the community, Native or European, could be benefited, than by his modest, and even retiring character, and extensive charity.

The friend and correspondent of Mr. Colebrooke, Professor Wilson, Mr. W. B. Bailey, and many other gentlemen formerly connected with India; he was known in Europe as here, as one possessing not only great acquirments in the literature of his country, but an ardent desire to see its children regain their ancient place amongst the families of the human race; and towards this noble end, for a whole life were his strenuous endeavours directed. Perhaps indeed with too much zeal; for there is reason to believe, that he fell a sacrifice to over-exertion in study, superadded to the labours which his highly responsible situation of Dewan of the Bank of Bengal necessarily imposed upon him.

The Honorable the President proposed, and it was agreed to *nem diss*. that a letter of condolence, expressing the deep regret of the Society, should be addressed to his family.

The following letter was in consequence addressed to Baboo Hurreemohun Sen, the son of the deceased, and is inserted here for the sake of connection :--

TO BABOO HURREEMOHUN SEN.

S18,-I am desired by the Honorable the President and Members of the Asiatic Society to convey to you, and to request, that you will express to the other members of Aug. 1844.] Proceedings of the Asiatic Society. lxxxiii

the family of your late father, the deep and unfeigned regret with which the Society has learnt his decease.

They cannot, Sir, on such an occasion refrain from testifying to you and his relatives and friends, the high esteem which his literary acquirements, his steady advocacy of the cause of native education, his many private and public virtues, and his long and valuable services to the Society had won for him from its Members, and from every friend to literature and science both in India and in Europe, to whom he was known; nor will the Society cease to cherish his name, and to deplore his loss, as one of the most distinguished and most deeply lamented of their associates.

	I am, &c.		
Museum, 9th August, 1844.	(Signed) H. TORRENS,		
	V. P. and Secretary Asiatic Society.		

Read the following Report from the Curator of Museum Economic Geology, &c. &c.

REPORT OF THE CURATOR MUSEUM ECONOMIC GEOLOGY AND GEOLOGICAL AND MINERALOGICAL DEPARTMENTS, FOR THE MONTH OF JULY.

We received sometime ago from our zealous contributor, Captain Newbold, for the Geological and Mineralogical, rock from the junction of the diamond limestone and sandstone

gical. rock, from the junction of the diamond limestone and sandstone near Kurnool. This I have been occupied with, and though the results are of no great interest, they may be worth placing on record to save the labour of others, who like Captain Newbold and myself, may be struck with its appearance and remarkable smell when fresh fractured. The paper being merely chemical, would barely interest the Meeting, but may be thought worthy of insertion in the Journal.

From Dr. Spilsbury, who I rejoice to say, has kindly promised us to continue his wellknown and indefatigable services, we have received five specimens of the slaty sandstone of Bundlecund, with the dendritic impressions which are now considered to be metallic, and not, as formerly, vegetable. "The locality from which these are obtained," says Dr. Spilsbury, "is Miswangso, about nine miles North of Saugor, on the high road to Jhansee and Gwalior, where it is extensively quarried for building purposes. You will observe, it varies from almost white down to brick red."

Dr. Spilsbury also announces, that he has collected specimens of the fine coal of Lameta on the Nurbudda, close to Jubbulpore, which will be soon forwarded.

Lieut. Sherwill of the Revenue Survey Department, has forwarded to us speci- *Museum of Economic Geology.* mens of the Sitajeet of Behar. The following is the extract from his letter:—

"By to-day's dak banghy, I have despatched several specimens to your address, of a substance called by the natives Sitajeet. **Example 1** It is procurable in small quantities from a range of very curious formed granite hills on the borders of the Palamow Forest, not far from the Sone river. It is found high up in the rocks in small whitish globules, is scarce, and much sought after by the natives, who with great difficulty

* We are indebted to Captain Newbold for several other contributions, but as they require examination, I have not yet been able to bring them forward. not unattended with danger, gather it towards the end of the cold weather. It is valued as a great restorative and aphrodisiac. On the table land of Rhotasgurh I have seen it on the face of the great mural precipices, wearing the appearance of tar or pitch, or oozing from the sandstone,* but heing far beyond the reach of man, it may or may not be this substance. The natives declared it is the *Sitajeet*. You will perceive mine has a strong taste of alum.

Lient. Sherwill's specimen is on the table, and is a hlack aluminous shale, with an acid efflorescence of alum, contaminated with a little iron. If ahundant and accessible, and with plenty of fuel at command, no doubt alum might he advantageously manufactured from it. Perhaps even by solar evaporation only? The aluminous efflorescence answers in many of its chemical characters to the Sitajeet described, and analysed by Mr. Stephenson in Vol. II. p. 321 of the Journal, but ours gives a light cloud with nitrate of silver from the excess of sulphuric acid, and the same with oxalate of ammonia, shewing, that it may contain a little lime. I also used ammonia to precipitate the alumina in the gelatinous form. Heated in a platina spoon it melts and hoils up into a round dull greyish white bubble, which remains solid at a strong heat hetween the forceps; moistened with nitrate of Cohalt it gives the usual blue colour.

The description Lieut. Sherwill gives of the tar-like appearance of some of the exudations, much reminds us of Buchanan's description of that which he visited at Tapohan in the Rajagriha Hills in Behar. At page 255, Vol. I, of Martin's edition, he thus describes the substance itself, after the detail of the locality and the manner in which an old man of the Musahar tribe collected it before him.

"When fresh from the rock, Sitajeet is of a dirty earth colour, and is always mixed with impurities, that crumble into it from the precipice above. It it then about the consistence of new houey, and has a strong rather disagreeable smell, although it cannot he called very offensive. When kept in a hottle with a glass stopper for some months, it acquires a deeper brown colour, and becomes thicker; and exposed to the air, it may soon he made into pills. It seems to be very different from a substance which, in Nepal, is called by the same name. From the hot springs in the vicinity, and the heat of the cave helow, I suspect that it exudes from the action of subterraneous fire. The natives pretend that monkies eat it, and attribute the small quantity procured to their depredations; but I think that the circumstance is douhtful, and have no doubt, that, with care and a ladder, several pounds might he procured, should it he found useful; hut it owes its celebrity among the natives to its heing supposed to possess the imaginary quality of an aphrodisiac. When placed on hurning charcoal, it swells a little and smokes, and when heated red, is reduced to white ashes without emitting flame. It cannot I presume, therefore, be considered as a hituminous or inflammable substance, the only class of minerals to which it has any resemblance.

* This may be Mineral tar and an indication of the presence of Asphalte. I wrote to Lieut. S_{\bullet} requesting him to look for this mineral, of which I sent him also a specimen.

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